



## Economic and Workforce Development Program ANNUAL REPORT

# 2017

California Community Colleges Chancellor's Office | Eloy Ortiz Oakley, Chancellor  
Workforce and Economic Development Division | Van Ton-Quinlivan, Vice Chancellor





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# MESSAGE FROM OUR CHANCELLOR



CALIFORNIA COMMUNITY COLLEGES  
CHANCELLOR'S OFFICE

*State of California*

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**March 1, 2017**

**The Honorable Edmund G. Brown, Jr.  
Governor of California**

State Capitol  
Sacramento, CA 95814

Dear Governor Brown:

I present to you the California Community Colleges Economic and Workforce Development Program Annual Report for 2015-16.

The Economic and Workforce Development program is an incubator of educational and workforce innovation for the Golden State. Specifically, it invests in the development, execution and distribution of world-class skills training to Californians seeking to be work-ready employees in the California businesses that need them to thrive. The program is a critical conduit that combines the unique assets of local academia, industry and other stakeholders to create opportunities and enable social mobility for Californians. Moreover, Economic and Workforce Development funds, when braided with funds from other sources like the federal Carl D. Perkins Career and Technical Education Act and the state Career Technical Education Pathways Act (SB1070, 2012), can empower tremendous growth for the state.

This report highlights our efforts in building a strong workforce through the state's seven macroeconomic regions and 10 targeted economic sectors and industries.

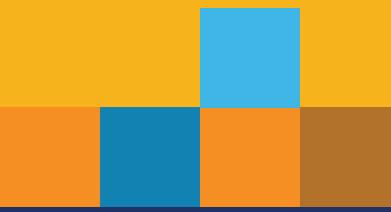
If you have any questions regarding this annual report, please contact Workforce and Economic Development Division Vice Chancellor Van Ton-Quinlivan at 916-327-5492 or [vtquinlivan@cccco.edu](mailto:vtquinlivan@cccco.edu).

Thank you for your interest in the California Community Colleges Economic and Workforce Development Program.

Sincerely,

A handwritten signature in black ink, appearing to read 'NOQ' with a stylized flourish.

**Eloy Ortiz Oakley**  
Chancellor



# EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

The California Community Colleges, through the Economic and Workforce Development Program (EWD), is an incubator of educational and workforce innovation that results in a growing economy for California. The system collaborates with industry to develop and deliver cutting-edge career and technical education (CTE) skills training so Californians can earn well-paying jobs with employers that need them. The entire Golden State reaps the rewards, with two predominant benefactors:

- **workers** who can move into living-wage jobs, provide for their families and enjoy social mobility; and
- **employers** who can hire work-ready employees with the skills necessary to allow their companies to compete on a global scale.

In the last several years, California lawmakers have recognized as a state policy priority the workforce mission of California's 113 community colleges, increasing funding from \$100 million to nearly a billion-dollar state investment in growth. The mission is executed through a unifying framework serving the colleges called **Doing What MATTERS for Jobs and the Economy (DWM)**. This framework of "intrapreneurs" (defined as forward-thinking, calculated risk-takers within large organizations) allows colleges to collaborate rather than compete when preparing students for the workforce. It also allows employers and other stakeholders to become workforce partners and better associate the value of California community colleges to jobs and the economy.

## INVESTMENT

In 2015-16, EWD awarded \$24.8 million to initiatives to fund 95 grants statewide, compared with the \$22.9 million in 2014-15. These initiatives strengthened regional collaboration and supported alignment between career and technical programs at the community colleges and the needs of industry sectors. Ten industry sectors received priority based on current and emerging labor market needs and opportunities to prepare students to compete in a global economy. Funding distribution is noted in Table 1.



CALIFORNIA COMMUNITY COLLEGES  
**Doing What MATTERS™**  
FOR JOBS AND THE ECONOMY

## OUTCOMES

The DWM strategy of increasing outreach to employers within regions and priority industry sectors has contributed to continuing momentum in EWD's program, student and employer outcomes. Likewise, EWD investments, when braided with funds from other sources like the federal Carl D. Perkins Career and Technical Education Act and the state Career Technical Education Pathways Act (SB1070, 2012), have yielded impressive results, including:

- **61,056** students served
- **19,624** employees served
- **55,521** total people trained (as of December 2016)
- **3,114** students enrolled in work-based learning (i.e., internships and apprenticeships)
- **19,233** completions of workshops and training
- **1,433** students placed in jobs
- **9,414** employees retaining jobs
- **12,159** businesses served
- **1,584** people hired by businesses served by EWD
- **149** new products and services created by businesses across California with the support of EWD services

*Please refer to Exhibit 7 for more information.*

## STRONG WORKFORCE PROGRAM

An addition to the EWD portfolio is the Strong Workforce Program, a bold step to create one million more middle-skilled workers. At the recommendation of the California Community Colleges Board of Governors, the governor and Legislature in June 2016 approved the Strong Workforce Program, adding a new annual recurring investment of \$200 million to spur career technical education (CTE) in California's community colleges.

Grouped into seven areas targeting **student success, career pathways, workforce data and outcomes, curriculum, CTE faculty, regional coordination and funding**, this leading-edge state economic development program is driven

by "more and better" CTE. The "more" pertains to increasing the number of students enrolled in programs leading to high-demand, high-wage jobs. The "better" aligns with strategies to improve program quality, as evidenced by students completing or transferring programs, becoming employed or improving their earnings.

## WIOA STATE PLAN

To implement changes in federal law, the California Workforce Development Board (CWDB)—the state's lead workforce development policy agency—developed a Workforce Innovation and Opportunity Act (WIOA) State Plan to operationalize recommendations from the WIOA Implementation Work Group, co-chaired by California Community Colleges Vice Chancellor Van Ton-Quinlivan and CWDB Executive Director Tim Rainey. Based upon this group's efforts, the State Plan provides strategies to develop multi-agency metrics and the creation of a cross-agency data system that fosters regional collaboration and alignment of workforce and education systems. Regions drive most of this work, but the state also has key roles to play. These include working with the regions to forge a shared vision, as well as coordinating the activities of state institutions to support that vision and removing barriers to implementation. Elements within the Strong Workforce Program build from this existing body of work.

In conclusion, EWD's role as an incubator of educational and workforce innovation, with its strategic initiatives and partnerships, is yielding measurable benefits to students, employers and California's economy.



Photo Credit: Norco College

## EXHIBIT 1: EWD INVESTMENTS

Grantees and Functions	Number of Grants	Amount Awarded
<b>Sector Navigators</b> , statewide experts in their respective industries, fostered collaborative partnerships within each of the 10 priority industry sectors and the California Community Colleges.	10	\$3,725,000
<b>Deputy Sector Navigators</b> , local experts in their respective industries, improved contacts between businesses and community colleges in each of the seven macroeconomic regions, enhancing alignment between career pathways and employer needs.	65	\$13,200,000
<b>Industry-Driven Regional Collaboratives</b> built networks of regional public, private and other community-based organizations to support college efforts to meet regional industry training and education needs.	8	\$3,240,524
<b>Centers of Excellence</b> provided expert consultation on occupational and economic trends and supported data collection.	7	\$1,400,000
<b>Capacity Building, Training and Support</b> <b>Technical Assistance Providers</b> provided expertise in various areas of specialization.	5	\$3,227,525
<b>Total</b>	95	\$24,793,049

Additionally, EWD funds, when braided with funds from other sources like the federal Carl D. Perkins Career and Technical Education Act and the state Career Technical Education Pathways Act (SB1070, 2012), have played a pivotal role in:

- Supplying the ecosystem of sector experts whose role is to better connect industry and local workforce development agencies to the world's largest skills development system.
- Supporting colleges with labor market research expertise necessary to inform investment of resources.
- Launching new data tools that allow faculty and administrators to see the workforce outcomes of their students.
- Incubating new and innovative programs such as New World of Work (see page 22 for more details) which provides students with essential "soft skills" (interpersonal communication, teamwork, professionalism, customer service, communication) that employers demand.

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# BACKGROUND AND STRUCTURE

## ECONOMIC AND WORKFORCE DEVELOPMENT PROGRAM

### AN INCUBATOR OF EDUCATIONAL AND WORKFORCE INNOVATION

The California Community Colleges' Economic and Workforce Development Program (EWD) advances the economic growth and global competitiveness of California and its regional economies through education, training and other services, thereby contributing to continuous workforce improvement, technology deployment and business development.

To achieve these goals, EWD provides grant funding to help community colleges become more responsive to the needs of employers, employees and students. Grantees funded by EWD:

- **assist community colleges** in collaborating with other public institutions in an effort to align resources, foster cooperation across workforce education and service delivery systems, and build well-articulated career pathways; and
- **develop strong partnerships** with the private sector, ensuring industry involvement in community college programs.

## DOING WHAT MATTERS FOR JOBS AND THE ECONOMY – A UNIFYING FRAMEWORK FOR INNOVATION

EWD is one of the main programs supporting work under Doing What MATTERS for Jobs and the Economy (DWM), a unifying framework for intrapreneurship and innovations at scale. DWM provides structure for a system of service to community colleges, employers, workers and students aimed at supporting the growth of California's regional economies. An important feature of the framework is that it encourages the 113 community colleges to work together to prepare students for the workforce, rather than compete against each other for funding.

To best serve as a conduit to connect academia, industry and other stakeholders, the DWM structure is segmented by industry sector and geographic region, as shown on pages 15 and 16.

### DOING WHAT MATTERS FOR JOBS AND THE ECONOMY



## ECONOMIC AND WORKFORCE DEVELOPMENT PROGRAM

**The intent of the program is to:**

- Maintain its core mission to advance California's economic growth and global competitiveness.
- Strengthen linkages between EWD programs and other state workforce and economic development systems and programs in order to train and educate a highly skilled workforce for the mutual benefit of industry and students.
- Support the regional alignment between the career technical education programs of the community college system and the needs of California's competitive and emerging industry sectors.
- Ensure that EWD programs are being developed, tracked and evaluated based on data-driven analyses and common metrics.



#### Small Business



#### Retail/Hospitality/Tourism "Learn and Earn"



#### Life Sciences/ Biotechnology



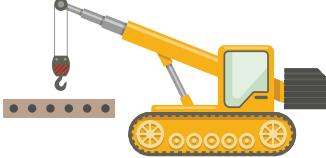
#### Global Trade & Logistics

# INDUSTRY SECTORS

In 2013-14, each economic region identified industry sectors with maximum economic impact and demand for a skilled workforce. Each is served by a statewide sector navigator and regional deputy sector navigators.



#### Advanced Transportation & Renewable Energy



#### Energy, Construction & Utilities



#### Information & Communications Technology/Digital Media



#### Health Workforce Initiative



#### Agriculture, Water & Environmental Technologies



#### Advanced Manufacturing & Advanced Technology

## REGIONAL CONSORTIA



As California is a collection of distinct geographic regions, the DWM framework is similarly structured. Each region is serviced by a regional consortia chair (see page 110) and deputy sector navigators (see next page). The seven macroeconomic regions are:

- Sacramento and Far North
- Bay Area
- Central Valley / Mother Lode
- South Central
- San Diego and Imperial Counties
- Inland Empire / Desert
- Los Angeles and Orange County



## THE INTRAPRENEURS OF DOING WHAT MATTERS FOR JOBS AND THE ECONOMY

DWM encourages an active ecosystem of “intrapreneurs” — defined as forward-thinking, calculated risk-takers within large organizations — to bolster career and technical education in California’s 113 community colleges.

Because the whole is greater than the sum of its parts, DWM is focused on inspiring multiple stakeholders within and beyond academia to engage in education and workforce development. To that end, DWM is staffed with a venture capital model of intrapreneurs who are empowered and charged to develop workforce development solutions collectively and innovatively. These grantees are experts in their industry sectors, regions and technical specialties.

 **Sector Navigators** are the first contacts for employers and the community college system in a given priority sector. These statewide professionals:

- Develop an advisory structure for their sector and work across regions (or statewide) to coordinate work plans and communications between their deputy sector navigators.
- Partner with regional consortia (see page 108) and technical assistance providers (see next column) to align community college and other workforce development resources with the needs of industry.
- Track industry trends with workforce development implications and assist the community college system in connecting to industry associations and major employers.
- Facilitate the spread of information by identifying and disseminating curriculum models and effective practices and alerting and mobilizing regional consortia to pursue contract and grant opportunities.

 **Deputy Sector Navigators** are in-region contacts for a given sector. These regionalized professionals:

- Work with their region’s colleges and employers to create alignment with workforce training and career pathways.
- Operate within the seven macroregions designated under the DWM framework (see previous page). Within each macroregion there are between five and seven deputy

sector navigators, each serving a different priority or emergent industry sector.

- Collaborate with their sector navigator and fellow deputy sector navigators working in the same sector to comprise a statewide, industry-focused network that normalizes work plans, provides for exchange of effective practices and fields “how to” questions from colleges and employers.

### Centers of Excellence for Labor Market

**Research** are labor market and data resource centers for education and industry stakeholders. These centers provide real-time and forecasted industry-validated regional labor market research. As part of the DWM framework, these centers provide regional consortia and sector-based initiatives with labor market information useful in decision making, including data to support better alignment of labor market workforce demands with training capacities at the colleges, within the region and across the state.

**Industry-Driven Regional Collaboratives** are short-term, grant-funded networks of regional public, private, and other community-based organizations. They support community colleges’ efforts to meet regional industries’ training and education needs. Responsiveness to these collaboratives is designed to allow for ample local autonomy and flexibility in decision making. Examples of services are:

- Providing professional development on new curriculum and instructional modes to community college faculty.
- Providing counseling and training to businesses aimed at helping them succeed and grow.
- Developing model curriculum/instructional packages, creating new courses and instituting up-to-date instructional methodologies and technologies needed to train students and incumbent workers on new technologies.
- Offering instruction through new programs/courses, work-based learning opportunities and performance improvement training.
- Purchasing equipment necessary to support eligible activities.

 **Technical Assistance Providers** enable the Chancellor’s Office, individual colleges, regional consortia, sector

navigators, deputy sector navigators, sector partnerships and collaborative communities of practice to more effectively carry out their roles by providing subject matter expertise in these areas:

- Apprenticeships
- Communications
- Contract education and alternative fee structures
- Data tools through the LaunchBoard (learn more on page 21)
- Employability skills through New World of Work (learn more on page 22)
- Internship back-end payroll services
- K-14 pathways
- Leadership and coordination support
- STEM/STEAM through Innovation Maker 3, CCCMaker and Teacher Prep Pipeline
- Strong Workforce Program implementation
- Third-party credentials

### **STRONG WORKFORCE PROGRAM – “MORE” AND “BETTER” CAREER TECHNICAL EDUCATION FOR ONE MILLION MORE SKILLED WORKERS**

The sector work of Economic and Workforce Development built a strong foundation for the Doing What MATTERS framework and allowed EWD to lay the groundwork for a groundbreaking mission, the \$200 million Strong Workforce Program.

Projections indicate that by 2025, 30 percent of all job openings in California (a total of 1.9 million jobs) will require some type of middle-skills training – postsecondary education short of a four-year degree – and the state is expected to fall short one million skilled workers.

The California Community Colleges Board of Governors aimed to stem this tide by initiating the development of the Strong Workforce Program, an annual recurring \$200 million investment from the California Legislature designed to activate “more” and “better” career technical education in the 113 community colleges. With legislation passing in June 2016, the remainder of the year was spent planning and preparing for the Strong Workforce Program, while 2017 will be a year of execution and evaluation.

Developed with the input of more than 1,200 stakeholders across the state, the Strong Workforce Program addresses seven key areas with 25 supporting recommendations for action:

- **Remove barriers to education completion** with improved career exploration and planning, work-based learning and other support.
- **Position industry at the forefront of career pathway development** with clear, defined sequences for learning industry-valued skills.
- Commit to **continuous program improvement** based on robust metrics and outcome data.

### **DEFINING SUCCESS WITH THE STRONG WORKFORCE PROGRAM**

“More” Career and Technical Education	“Better” Career and Technical Education
Increased enrollment in programs leading to high-demand, high-wage jobs	<ul style="list-style-type: none"><li>• Skills gains</li><li>• Completion</li><li>• Transfer</li><li>• Employment rates</li><li>• Employment in field of study</li><li>• Earnings</li><li>• Median change in earnings</li><li>• Proportion of students who attained living wages</li></ul>

- **Streamline the curriculum-approval process** to deliver in-demand skills at the speed of business, not the speed of lengthy approval cycles.
- **Increase the pool of qualified CTE faculty** through modified education requirements and salary differentials.
- **Enable regional coordination** to pool resources and efforts for CTE and responding to industry needs.
- **Establish a dedicated and sustainable funding source** for CTE programs that's not dependent on grants or enrollment numbers that don't account for the smaller student-to-teacher ratio required by many CTE courses.

The Strong Workforce Program focuses on **data-driven outcomes** rather than activities, along with an emphasis on innovation and risk-taking. In this way, colleges can be more responsive to labor market conditions and student outcomes. CTE Data Unlocked, a component of the program (learn more on page 21), helps colleges use CTE data to strengthen regional workforce plans by furthering local processes like program review, accreditation, and integrated planning.

The ongoing funding is structured as a **60 percent Local Share** allocation for each community college district and a **40 percent Regional Share** determined by a regional consortia of colleges to focus on the state's seven macroeconomic regions. Both the Local and Regional Share require local stakeholders to collaborate, including industry and local workforce development boards. As much as possible, this program builds upon existing regional partnerships formed in conjunction with the federal Workforce Innovation and Opportunity Act, state Adult Education Block Grant and public school CTE programs.

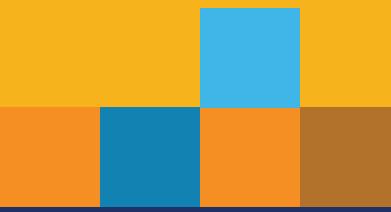
## WORKFORCE INNOVATION AND OPPORTUNITY ACT

California state law requires the California Workforce Development Board to collaborate with the chancellor of the California Community Colleges, the California Department of Education, other appropriate state agencies and local workforce development boards to develop a comprehensive state plan as a framework for public policy, fiscal investment and the operation of all state labor exchange, workforce education and training programs. State law specifically

The Economic Development Program Advisory Committee (EDPAC) is an advisory body established to fulfill the statutory requirements of SB 1402, which is the California law authorizing the Economic and Workforce Development program. The Workforce and Economic Development Performance Advisory Committee (WEDPAC) complements EDPAC by incorporating partners outside the state's community college system. Combined, these advisory boards promote discussion between industry, labor, economic development, policy advocacy, related state agencies, as well as community college faculty, classified staff, administrators, students and district trustees.

directs the California Workforce Development Board to develop a plan that builds regional alliances between workforce and education professionals and employers to meet industry's workforce needs.

State planning requirements anticipate, and are consistent with, the policy direction prescribed in the Workforce Innovation and Opportunity Act. This state plan coordinates training services and investment to align with industry needs by organizing efforts around career pathways and regional labor market trends. By doing so, this state plan is designed to meet both state and federal planning requirements while also providing a comprehensive framework for partnership between private industry and the state's publicly-funded workforce and education systems.



# ECONOMIC AND WORKFORCE DEVELOPMENT AS AN INCUBATOR OF EDUCATIONAL AND WORKFORCE INNOVATION



With the Doing What MATTERS for Jobs and the Economy unifying framework of intrapreneurs, the Economic and Workforce Development Program is empowered to be an incubator of educational and workforce innovation, and numerous successes featured here illustrate the point. Additional innovations and best practices by priority sector can be found in Appendix A.

## **INNOVATIONS IN DATA: LAUNCHBOARD AND LABOR MARKET INFORMATION LIBRARY "FREE THE DATA"**

Each year, California Community Colleges, through Economic and Workforce Development, adds to its suite of world-class data tools to support program development and improvement and student outcomes. Previous successes include:

- **SalarySurfer**, a tool that provides detailed data on median salaries for students two years before, two years after and five years after completing career and technical education (CTE) degrees or certificates at a California community college. It assists students to determine which programs to pursue to help improve their economic situations and enable social mobility.
- **Student Success Scorecard**, which provides transparency on student enrollment and outcomes at each of the 113 California community colleges, including outcome data for students who partially complete career and technical education programs.

In 2016, EWD released improvements to its **LaunchBoard** tool and related **CTE Data Unlocked** training, and it launched its **Labor Market Information Library** to fulfill the request of CTE deans to "free the data" to help them improve student outcomes.

The **LaunchBoard** is a statewide data system that provides data on the effectiveness of career and technical education programs. The information is intended to facilitate local, regional and statewide conversations about how to improve students' educational and employment outcomes. **The innovation of LaunchBoard is how it automates data feeds to calculate workforce metrics, thereby reducing data collection efforts by campuses and increasing the quality of the data.** Aided visibility and ease of use increased access by a broad range of users at varied levels of data skills.

As a result of LaunchBoard's innovations, decisions are more data-driven and evidence-based, resulting in strategic investments based on proven practices. The LaunchBoard accountability dashboard, now in version 2.0, gives California Community Colleges a tool to report and share the effectiveness of their programs by tracking student outcome data and economic impact. It is a powerful new tool to support the development and improvement of career technical education programs.

The **Program Snapshot**, a part of the LaunchBoard data system, promotes access to data on student outcomes and labor market information. This feature gives faculty and college leadership easy access to the information needed for program review, accreditation, college planning and regional coordination.

Practitioners can access information by Doing What MATTERS sector (such as healthcare or advanced manufacturing), program, college and region. Information is displayed in a visual format, based on common questions such as "Are we training the right number of students for available jobs?" "Are there equity gaps in student success?" and "Are students getting jobs?"

Users can also drill down to more detailed data tables, where they can disaggregate results by 20 different factors including demographic information, special needs status and prior education. Each metric shows the most recent year's figures as well as a three-year trend, regional totals and statewide figures.

In addition to viewing information online, users can download information into multiple applications and insert it directly into reports, PowerPoint presentations and websites. Excel worksheets can also be downloaded to facilitate further research into student outcomes.

## **UNLOCKING LAUNCHBOARD'S DATA WITH CTE DATA UNLOCKED**

To help practitioners harness the power of LaunchBoard, the Strong Workforce Program enabled creation of CTE Data Unlocked, a statewide training program consisting of:

- In-depth, in-person training and a vast library of print and video resources.
- \$50,000 in related funding.
- 10 hours of free technical assistance from a CTE Data Unlocked Expert to support data usage.

## LABOR MARKET INFORMATION LIBRARY

Additionally, 2016 saw the launch of the Labor Market Information Library, a curated compilation of reports and data tables relevant to career technical education program planning. Included reports' focus is occupational and includes timely information on workforce needs and/or trends relevant to California Community Colleges. This easy-to-use tool allows CTE practitioners to select a sector or program and the geographic area, resulting in a list of accurate, current and reliable resources to help understand the status of the selected industry.

EWD's innovations in data are positioning California Community Colleges as a data leader. The White House Domestic Policy Council asked California Community Colleges leadership to participate in briefings to help other states evolve their community college data tools. In addition, experts from California Community Colleges serve as advisors to the Workforce Data Quality Campaign (WDQC), a nonprofit that aims to use data to advance the U.S. workforce and help our country's industries better compete in a changing economy.

*"The LaunchBoard makes the California Community College system the national leader in the development of data base tools for aligning student's career aspirations, curricula and labor market opportunities. The LaunchBoard offers community college practitioners detailed and readily accessible information on student progress, credential attainment, employment outcomes, and labor market information all in one place."*

**-Anthony P. Carnevale**

Research Professor and Director,  
McCourt School of Public Policy  
Georgetown University Center on  
Education and the Workforce



## NEW WORLD OF WORK: PROOF-OF-CONCEPT AT SCALE THAT'S ALREADY EARNING ACCOLADES

Experience has taught the Economic and Workforce Development program that starting a program at one college with its unique composition and needs and then retrofitting it to accommodate other colleges with different needs doesn't always work. Therefore, rather than funding one college at a time to pilot change, the program took an innovative approach by funding a network of ten colleges at the start. Doing so challenged colleges to organize for scale from the beginning.

To address employers' needs for soft skills, a 10-college network was awarded a grant as an EWD Industry-Driven Regional Collaborative to tackle the gap in employability/soft skills. The result is the New World of Work modular curriculum with badging technologies incorporated. Now this curriculum is being adopted by colleges region by region, rather than one college at a time. The thought is this: once proof of concept has been established for 10 colleges, adding the 15th, the 20th or the 113st can be much easier.

Additionally, the [Mozilla Foundation](#) named New World of Work as [one of two promising practices nationally](#) in higher education to develop and implement digital badges for soft skills.



## DRIVING INNOVATION AND 21<sup>ST</sup>-CENTURY SKILLS WITH THE CCC MAKER PROJECT

Provide experiential learning to establish the expectations in the new digital retail landscape.

The practice of “making” helps people bring ideas to life through community-focused venues described as “hacker labs,” “fab labs” and “makerspaces.” It also offers complementary learning environments to the traditional classroom and infuses the 21st century skills that employers demand: creative thinking, critical thinking, collaboration and communication.

With a drive to infuse traditional education with the maker movement and armed with research from a California Council on Science and Technology white paper titled [Promoting Engagement of the California Community Colleges with the Maker Space Movement](#), the Economic and Workforce Development program launched the [CCC Maker Project](#).

CCC Maker is the first statewide community college system effort in the United States that will intentionally:

- Grow a statewide network of STEM/STEAM-focused makerspaces linked to California community colleges to develop a workforce for the innovation economy (STEM is an acronym for “science, technology, engineering and math” and STEAM stands for “science, technology, engineering, arts and math”).
- Develop a California Community Colleges makerspace “Community of Practice” to serve as a state and national model.
- Align 21st century skills with STEM/STEAM research and practice.
- Support work-based opportunities for California Community Colleges students.
- Disseminate information and resources to ecosystem partners and key stakeholders.

Program advisors encompass a wide swath of industry, government and education with representatives from Adobe Systems Inc., AT&T, California Asian Pacific Chamber of Commerce, California Council on Science and Technology, Folsom Lake College Office of Innovation,

Governor’s Office of Business and Economic Development, Kiva, MakerEd, Maker Media, National Association of Community College Entrepreneurship, Northrop Grumman, Yuba College and VSP Global.

Of California Community Colleges 113 campuses, more than half participated in the earliest stages of the initiative and 35 are advancing plans to establish new or expand existing makerspaces to operate over the next three years.

## INNOVATIONS IN CURRICULUM: HEALTHCARE SOFT SKILLS TRAINING TOOLKIT

Rapid changes and expansions in the healthcare industry have created a “soft skills” gap that all healthcare employees need to meet industry expectations. Workers may have “strong technical skills but need more education in ‘soft skills’ such as interpersonal communication, teamwork, professionalism, customer service, communication, (e.g., engage the patient in dialogue), motivational interviewing, peer-to-peer communication, strong work ethic, time management and the ability to function independently,” as reported in [Impact of the 2010 Affordable Care Act on the California Health Care Labor Force](#), a report from University of California, San Francisco with the support of the Health Workforce Initiative of Doing What MATTERS for Jobs and the Economy and other partner organizations.

The Health Workforce Initiative Sector Navigator Linda Zorn and deputy sector navigators responded to the need with a comprehensive training toolkit designed to instill soft skills in incumbent healthcare workers at all levels. “Hi-Touch Healthcare: Critical Six Soft Skills” encompasses 37 modules covering six essential soft skills:

- Communication Competency
- Workplace Ethics and Professionalism
- Team Building and Collaboration
- Effective Problem Solving
- Embracing Diversity
- Demonstrating Compassion

The toolkit is provided at no cost to healthcare organizations and is readily available at [www.ca-hwi.org](http://www.ca-hwi.org).

## INNOVATIONS IN PARTNERSHIPS WITH THE SMART MANUFACTURING INNOVATION INSTITUTE

The Advanced Manufacturing priority sector, led by Sector Navigator Jose Anaya, worked with a nationwide consortium of nearly 200 partners from across academia, industry, and nonprofits to help UCLA's Smart Manufacturing Leadership Coalition win the bid to lead the new Smart Manufacturing Innovation Institute, in partnership with the United States Department of Energy. The consortium brings more than \$140 million in public-private investment from leading universities and manufacturers to develop smart sensors and digital process controls for use in advanced manufacturing – an initiative that can radically improve the efficiency of U.S. advanced manufacturing.

Doing What MATTERS for Jobs and the Economy is involved in all stages of the initiative. In addition to contributing matching funds to the winning consortium, Anaya helped write the workforce component of the winning grant. After the technology is adopted by industry, Anaya and his deputy sector navigators will help colleges develop career pathways so students can earn the high-demand jobs and employers can have a pipeline of work-ready talent.

## INNOVATION IN CAREER PATHWAYS: BUSINESS INFORMATION WORKER CURRICULUM ADOPTED AT 72 COLLEGES WITHIN 24 MONTHS

In response to employers' demand for digital and soft skills, the Information Communications and Technology / Digital Media and Small Business sector teams developed the Business Information Worker curriculum. The short-term, branded pathway prepares students for entry-level, middle-skill office jobs in six months or less, incorporating keyboarding, Microsoft Office (Word, Excel, Outlook) information systems, business communications and human relations/customer service.

Three stages are offered:

- **Business Information Worker I** offers entry-level skills with a solid foundation in Microsoft Windows and Office as well as strong digital and web literacy skills.
- **Business Information Worker II** adds skills in PowerPoint, QuickBooks, records management and collaboration software
- **Business Information Specialist** adds specialized skills such as project management, marketing support and graphic design.

Each stage includes relevant third-party certifications such as Microsoft Office Specialist or QuickBooks Certified User.

*In fewer than two years after the statewide launch of the Business Information Worker program, 72 colleges have joined the initiative.*

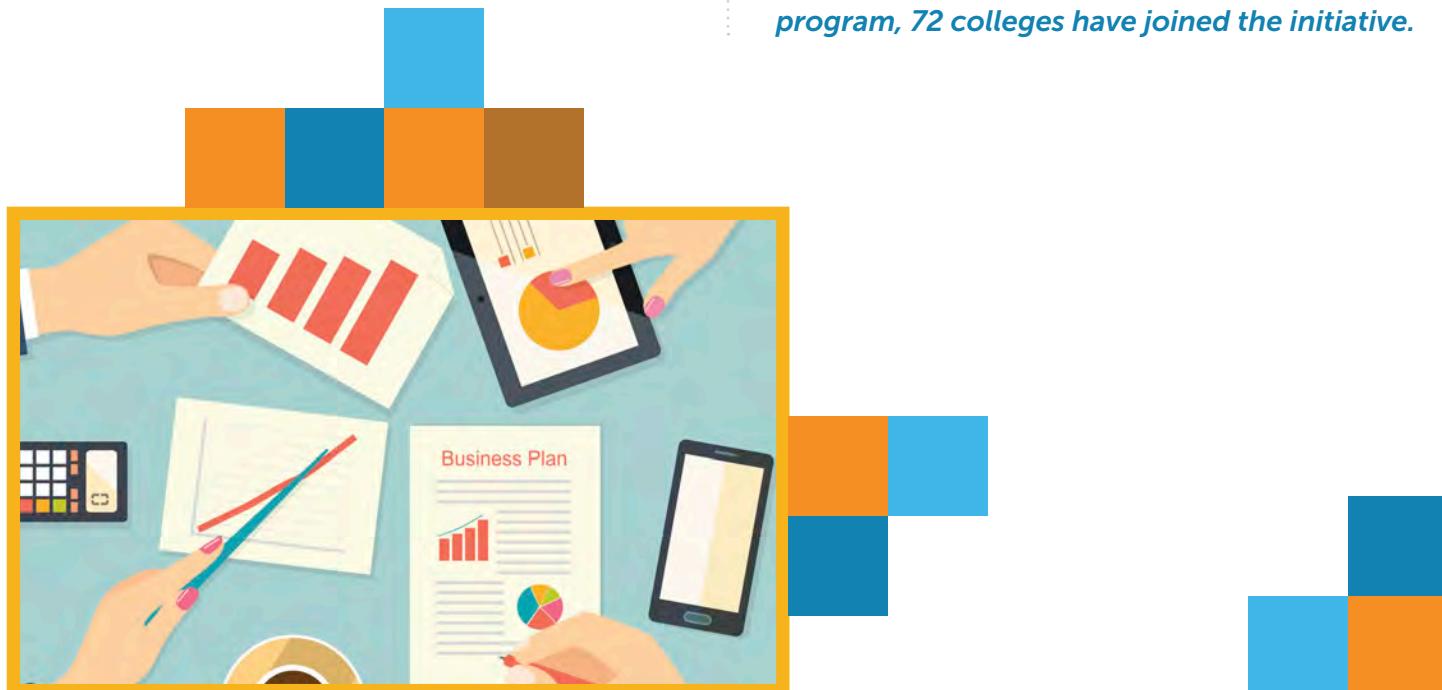




Photo Credit: Cuyamaca College

# OPPORTUNITIES, INVESTMENTS AND RESULTS

## THE OPPORTUNITY FOR SOCIAL MOBILITY: PROJECTED INDUSTRY EMPLOYMENT IN PRIORITY SECTORS

Demand for skilled workers in California is strong, as shown by the projected job openings in Doing What MATTERS for Jobs and the Economy priority industry sectors in Exhibit 2. All sectors are anticipated to experience new job growth over the three-year period with the exception of advanced manufacturing.

Sorted in descending order by number of jobs, the data below summarize:

- The current number of jobs in the state for eight of the 10 priority sectors.

- The most recent average annual earnings per worker<sup>1</sup>.
- The anticipated growth or decline in jobs through 2019 (this data does not include the estimated need for replacement workers, which is an important measure of demand for assessing occupational training programs).

Select examples of occupations related to the priority sectors and that have established community college application are profiled for the 2015-18 period in Appendix A. Although chosen for their relevance to one priority sector, the data represent employment estimates, projections and wages for each occupation across all sectors.

### EXHIBIT 2: JOB OPENINGS IN PRIORITY SECTORS, 2016

Sector <sup>2</sup>	Number of Jobs in 2016	Projected Change (2016-19)	Annual Change <sup>3</sup>	% Change (2016-19)	2015 Average Annual Earnings	% Change 2015-16
Retail, Hospitality and Tourism	3,411,135	163,125	54,375	5%	\$28,438	2.33%
Healthcare	1,673,094	117,360	39,120	7%	\$64,145	3.43%
Advanced Manufacturing	1,314,730	(44,642)	(14,881)	(3%)	\$82,966	0.30%
Energy Efficiency, Utility and Construction	1,087,597	56,170	18,723	5%	\$77,785	2.21%
Information and Communications Technology / Digital Media	1,016,179	62,898	20,966	6%	\$136,633	4.10%
Life Sciences/Biotechnology	897,916	38,787	12,929	4%	\$98,286	3.72%
Agriculture, Water and Environmental Technologies	609,837	13,941	4,647	2%	\$37,263	0.93%
Advanced Transportation and Renewable Energy <sup>4</sup>	575,078	15,482	5,161	3%	\$48,724	3.10%

Source: Center of Excellence

<sup>1</sup>Average annual earnings per worker are on a 'gross' basis and do not reflect wages by occupation. All regular employee wages in the industry sector are included in the average – part-time and full-time workers as well as all paid positions, from security guard to CEO, for example. These data include variable factors such as premium pay for overtime and late-shift work and changes in output of employees paid on an incentive plan.

<sup>2</sup> All employment data in this report provided by Economic Modeling Specialists International (EMSI), 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed. Totals are not representative of all industry employment in California. Industry sub-sectors overlap between sectors causing duplication while other non-related subsectors were not included.

<sup>3</sup> Annual change is the average yearly change for the projected period (2016-19).

<sup>4</sup> Due to the difficulty isolating industry employment data specific to renewable energy firms and functions, industry data shown here represents transportation industry codes only.

## THE INVESTMENT IN CALIFORNIA'S ECONOMY AND WORKFORCE: PROGRAM FUNDING

The following section explains the distribution of funds to bolster California's economy and workforce.

### INVESTMENT BY GRANT INITIATIVE

In 2015-16, EWD funded 95 grants across five major initiatives, totaling \$24.8 million as shown in Exhibit 3 below. Deputy sector navigators, those on the front lines of workforce development, received the lion's share of funding at \$13.2 million.



Photo Credit: Antelope Valley College

### EXHIBIT 3: 2015-16 FUNDING BY EWD GRANT INITIATIVE

Initiative	# of Grants	Value of Awards	Percentage of Total
Deputy Sector Navigators	65	\$13,200,000	53%
Sector Navigators	10	\$3,725,000	15%
Industry-Driven Regional Collaborative	8	\$3,240,524	13%
Centers of Excellence	7	\$1,400,000	6%
Capacity Building, Training & Support TAPs	5	\$3,227,525	13%
<b>Total</b>	<b>95</b>	<b>\$24,793,049</b>	<b>100%</b>

Source: EWD Quarterly and Final Expenditure Reporting System

### INVESTMENT BY PRIORITY SECTOR

While Doing What MATTERS supports 10 industry sectors statewide, each of the seven regions supports a selection of industry sectors that are most relevant and impactful to its regional economy. The five sectors most frequently selected among regions are:

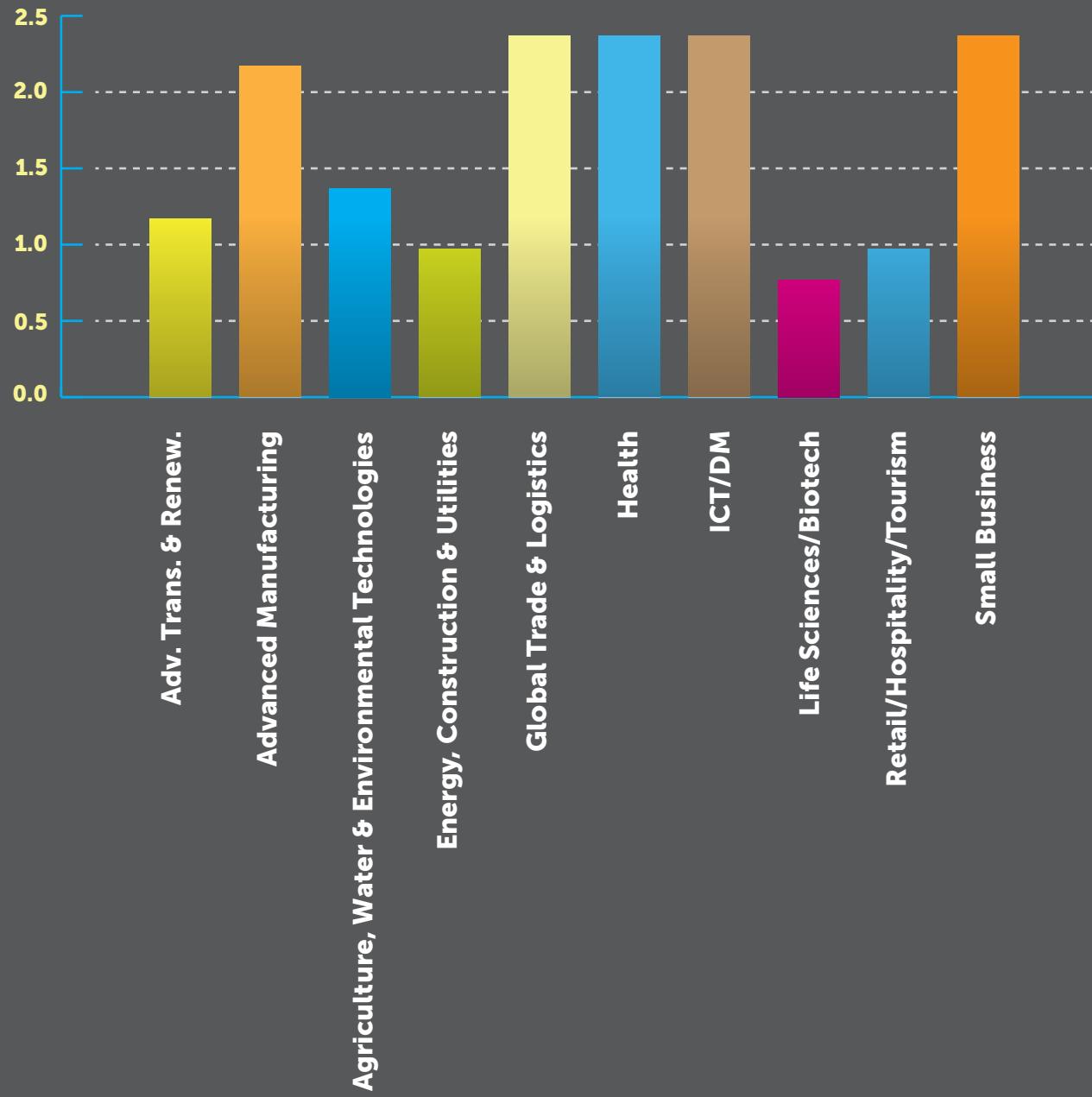
- Small Business
- Health
- Information and Communications Technology (ICT)/Digital Media
- Global Trade and Logistics
- Advanced Manufacturing

The amount of funding allocated to a given sector is correlated to the number of regions that select the sector as a priority area, as shown in Exhibit 4.



Photo Credit: Riverside City College

**EXHIBIT 4: 2015-16 FUNDING BY PRIORITY**





## INVESTMENT BY REGION

Similarly with investment by priority sector, EWD funding by region corresponds with the number of priority industry sectors identified as important for the region. Each region received at least seven grants and \$2.1 million in funding.

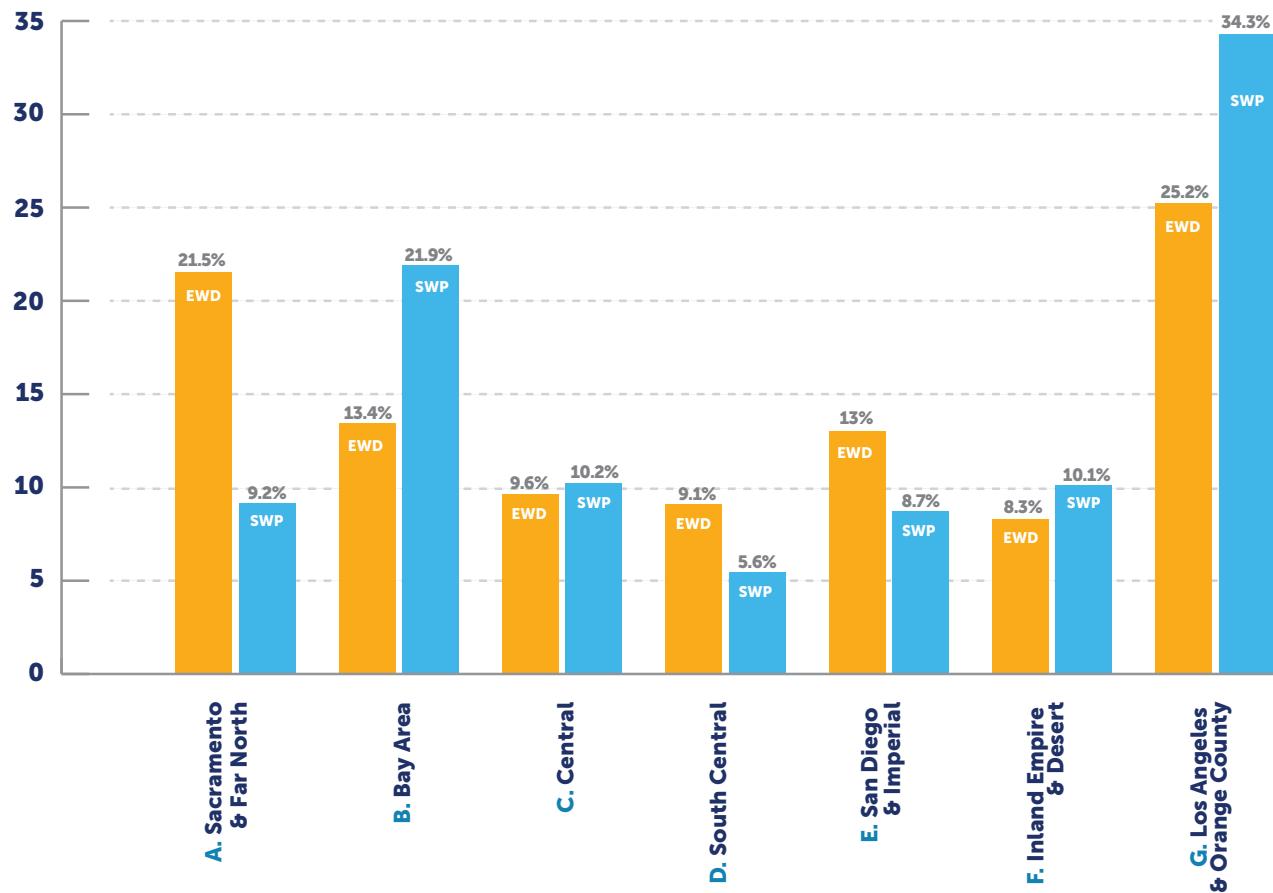
Separately, Strong Workforce fund allocations are determined by the Chancellor's Office according to:

- The local unemployment rate
- The region's proportion of CTE full-time equivalent students
- Proportion of projected job openings

**EXHIBIT 5: 2015-16 REGIONAL INVESTMENTS  
OF EWD AND STRONG WORKFORCE REGIONAL PROGRAMS**

Macroregion	EWD Award	# of EWD Grants	% EWD	SWP Award	% SWP
A -Sacramento & Far North	\$5,320,128	19	21.46%	17,427,113	9.17%
B - Bay Area	\$3,323,438	15	13.40%	41,689,751	21.94%
C - Central	\$2,372,500	10	9.57%	19,448,454	10.24%
D - South Central	\$2,250,000	7	9.08%	10,568,870	5.56%
E - San Diego & Imperial	\$3,217,500	12	12.98%	16,510,426	8.69%
F - Inland Empire & Desert	\$2,052,428	9	8.28%	19,258,893	10.14%
G - Los Angeles & Orange County	\$6,257,055	23	25.24%	65,096,492	34.26%
Grand Total	\$24,793,049	95	100%	\$190,000,000	100.00%

**REGIONAL PERCENTAGE OF EWD AND SWP FUNDING**



## THE RESULTS OF INVESTING IN CAREER AND TECHNICAL EDUCATION

With the generation of 1,584 jobs, 149 new products and services and \$33.7 million in business revenue, career and technical education is proving to be a worthwhile investment for California to increase social mobility and deliver the skills companies need to thrive. Following are more details.

### EXHIBIT 6: IMPACTS ON BUSINESS

Jobs created	1,584
Employees retained	9,414
Business revenue generated	\$ 33,669,637
Sales increased	\$ 67,866,769
New products developed	65
New services created	84

Source: EWD Quarterly and Final Expenditure Reporting System

### EXHIBIT 7: IMPACTS ON EMPLOYERS, EMPLOYEES AND STUDENTS

Businesses served	12,159
Students served	61,056
Employees served	19,624
Programs completed	19,233
Contract education hours delivered	67,831
Performance improvement training hours delivered	55,521
Instruction hours delivered	102,872
Students placed in jobs	1,433
Students in work-based learning, internships and apprenticeships	3,114

Source: EWD Quarterly and Final Expenditure Reporting System

#### EXHIBIT 8: SERVICES PROVIDED TO COLLEGES

Curricula developed	212
Curricula aligned with third party	140
Programs of study developed	154
Curricula for career pathways developed	140
Professional development delivered	226
Connections to business and industry made	311
Research studies published	147

Source: EWD Quarterly and Final Expenditure Reporting System

#### EXHIBIT 9: SERVICES PROVIDED TO BUSINESSES

Curricula developed	123
Alignments of sectors with education	209
Business assessments	159
Small businesses created	53
Professional development for workers delivered	168
Connections with college and education	252
Research studies published	82

Source: EWD Quarterly and Final Expenditure Reporting System

# CONCLUSION

## CONCLUSION

Creating a strong workforce for California is a team effort. It is not something that community colleges, or workforce development agencies, or industry can do alone. Success requires full input of the unique assets and perspectives from all stakeholders: the entire community college system, education and workforce partners, business and industry and state policymakers.

The Economic and Workforce Development Program, through the Doing What MATTERS for Jobs and the Economy framework and its ecosystem of intrapreneurs, enables and nurtures effective collaboration, provides a structured support system and spurs workforce innovation to deliver the more than one million industry-recognized mid-skill credentials needed over the next decade in California's fast evolving and globally connected economy.

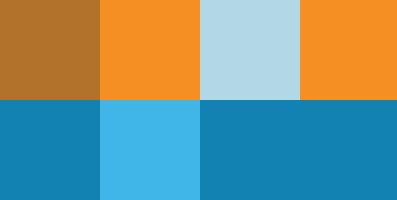
The initiatives funded in fiscal year 2015-16 created and strengthened the alignment between stakeholders, specifically:

- **Sector Navigators** and **Deputy Sector Navigators** continued to serve businesses through the Doing What MATTERS for Jobs and the Economy intrapreneurial ecosystem. Sector navigators provided statewide technical expertise for their priority and emergent industries. Likewise, deputy sector navigators connected colleges to their industries within the regions they represent.
- **Industry-Driven Regional Collaboratives** provided employers and colleges the opportunity to work together to create and improve course offerings, preparing students with the skills and education needed to fill high-demand jobs.
- **The Centers of Excellence** and **LaunchBoard** provided world-class data for laser-sharp, outcomes-driven strategic decisions.

The sum of this collaborative work enables the California Community Colleges to advance social mobility for more Californians through the attainment of in-demand skills employers require for good-paying jobs, lifting thousands of Californians out of poverty. It also provides employers with the skilled talent necessary to give their organizations the market distinction for competing on a global scale.

With the incremental support provided by the \$200 million Strong Workforce Program, the momentum for career and technical education will only increase in 2017-18 when plans take flight.

# METHODOLOGY



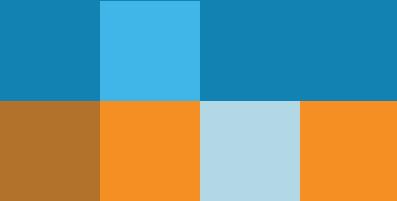
The data for this report were collected through quantitative and qualitative methods. Financial data and select performance information were collected through online grant reporting systems. Qualitative data, such as success stories, were collected through the Sector Navigators. The data presented in this report covers the grantee term fiscal year 2015-16.

## **QUANTITATIVE REPORTING**

With oversight by their EWD grant monitors in the Chancellor's Office, project directors and chief business officers report and certify their grants' budget and expenditures quarterly in the EWD Online Expenditure System. Before grants are closed, a report of their required match and any additional resources leveraged is also collected. Project directors, including sector navigators and deputy sector navigators, also provide a quarterly summary of performance information—a list of activities conducted and a report on outcomes achieved.

## **QUALITATIVE REPORTING**

Qualitative reporting provides rich detail about the achievements of EWD grantees that cannot be obtained through quantitative data only. Each of the 10 sector navigator grantees provided illustrative success stories, available in Appendix A.







## APPENDICES



## APPENDIX A



## ADVANCED MANUFACTURING & ADVANCED TECHNOLOGY

**Sector Navigator Jose Anaya**

[www.makingitincalifornia.com](http://www.makingitincalifornia.com)

**Sector Highlights**



**California's manufacturing sector of today employs advanced and versatile technology, with processes designed to maximize every step of the value chain.**

**Manufacturing jobs in California are thriving, and recent surveys suggest many California manufacturers plan to hire new workers. The sector's continuous and rapid evolution creates the need for workers who possess up-to-the-minute skills.**

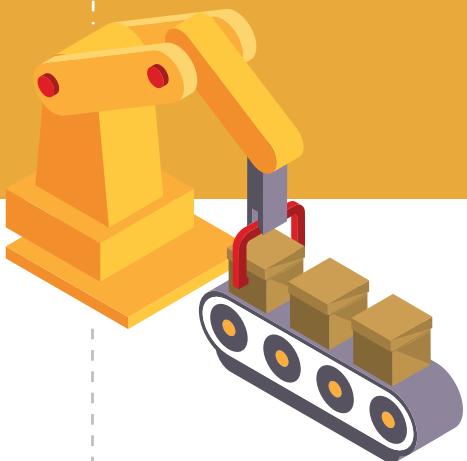
# 510,000

Los Angeles metro area has 510,000 jobs in manufacturing, the highest in the nation.



## California is a magnet for the manufacturing industry.

The highest-paying, middle-skills jobs in the advanced manufacturing sector, such as an electrical engineer technician, require an associate degree.



# 96,500

Due to retirements and other replacement needs, California will need to fill 96,500 positions in advanced manufacturing by 2020.



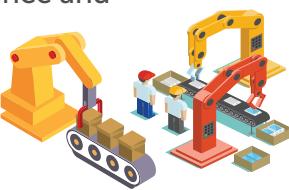
San Jose, San Francisco and San Diego are in the top 20 U.S. manufacturing hubs.

## OCCUPATIONAL TRENDS IN ADVANCED MANUFACTURING & ADVANCED TECHNOLOGY

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
First-Line Supervisors of Production and Operating Workers	59,867	(690)	2,819	2,819	940	\$54,169
Electrical & Electronics Repairers, Commercial & Industrial Equipment	6,543	94	341	435	145	\$58,319
Mechanical Engineering Technicians	4,742	81	353	434	145	\$60,297
Industrial Engineering Technicians	4,566	51	346	397	132	\$57,963
Semiconductor Processors	6,057	(179)	365	365	122	\$35,926

California Community Colleges' Centers for Applied Competitive Technologies (CACT) help California manufacturers compete in ever-changing markets and the global economy through customized technology education, manufacturing training and services that contribute to continuous workforce development.

Manufacturers benefit from onsite training, low- or no-cost technical assistance and educational workshops, as well as information on how to qualify for state funds to assist with retraining employees and upgrading equipment.



### Additionally, CACT:

- Provides industry-specific reports on manufacturing and emerging industries/technologies.
- Offers strategies for addressing specialized economic and workforce issues.
- Promotes science, technology, engineering and mathematics (STEM) education through school presentations.
- Develops recruitment tools and strategic partnerships.
- Delivers varied resources to help industry, educators and students succeed in "Making it in California."

card, certifying them to perform advanced technical work.



Cast members who successfully complete this program are eligible for job advancement and greater compensation. What's more, after completion of the program, only 16 additional credits are needed to earn an associate degree from Fullerton College.

"Fullerton College's robust vocational programs create a perfect partner for us as we look for ways to support the professional development of our cast members," said Disneyland Resort Vice President of Operations Rich Langhorst.

*"The Disneyland Resort Machining Training Program has been an awesome learning experience; it just shows me that you are never too old to learn new skills."*

*Andrew Fenton*

The vigorous program includes classroom instruction at Fullerton College, hands-on training at Disneyland Resort and training support from the International Association of Machinists and Aerospace Workers District Lodge 947. Program participants earn a Journeyman

# ADVANCED MANUFACTURING & ADVANCED TECHNOLOGY

## DATA SOURCES:

<https://www.brookings.edu/interactives/interactive-locating-american-manufacturing/>

[https://cwdb.ca.gov/plans\\_policies/WIOA\\_Unified\\_Strategic\\_Workforce\\_Development\\_Plan/](https://cwdb.ca.gov/plans_policies/WIOA_Unified_Strategic_Workforce_Development_Plan/)

(California Workforce Development Board, "Strategic Workforce Development Plan, 2016-20)

[https://www.bls.gov/regions/west/summary/blssummary\\_losangeles.pdf](https://www.bls.gov/regions/west/summary/blssummary_losangeles.pdf)

<http://blogs.wsj.com/economics/2015/07/15/where-are-the-most-u-s-manufacturing-workers-los-angeles/>







## AGRICULTURE, WATER & ENVIRONMENTAL TECHNOLOGIES

**Sector Navigator Nancy Gutierrez**

[www.calagcc.org](http://www.calagcc.org)

**Sector Highlights**



The Agriculture, Water and Environmental Technology initiative works to ensure the economic viability of California's agriculture and natural resources industry, while maintaining our environmental integrity, especially in the area of water – our most precious resource.

The work of this sector team supports the growth and development of several industry clusters, including agriculture support, agriculture production, agriculture wholesale trade, and agriculture water, forestry, natural resources and environmental services through various programs, including the following:

- **Environmental Training Centers**

Assist business and industry to conform to local, state, and federal environmental, health, and safety laws, regulations, ordinances and regulations.

- **Water & Wastewater Technology Programs**

Prepare and certify students for the municipal drinking water and wastewater treatment departments and industrial treatment facilities.

- **Agriculture & Natural Resources Programs**

Offer traditional education attainment as well as industry certification preparation in a variety of disciplines, including high-wage careers such as heavy equipment operators, landscape irrigation auditors, pest control advisers, agriculture sales representatives and many more.



# 8%



Food inspectors in California are paid an average 8 percent higher than those nationwide, with the state ranking **8th** among the states in average pay.



# \$20.7 billion

California's agricultural exports totaled **\$20.7 billion** in 2015.



## OCCUPATIONAL TRENDS IN AGRICULTURE, WATER & ENVIRONMENTAL TECHNOLOGIES

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Environmental Scientists & Specialists	16,618	849	1,588	2,437	812	\$80,453
Veterinary Technologists & Techs	10,964	866	348	1,214	405	\$37,067
Environmental Science & Protection Techs	4,651	281	611	892	297	\$46,611
Agricultural & Food Science Techs	3,609	131	363	494	165	\$38,864
Agricultural Inspectors	3,172	61	244	305	102	\$39,977

### BEST PRACTICE FOOD SAFETY TRAINING AND PATHWAY DEVELOPMENT

*Nancy Gutierrez, Sector Navigator for Agriculture, Water & Environmental Technologies*

The FDA Food Safety Modernization Act (FSMA) of 2011 is the most sweeping reform of our food safety laws in more than 70 years. For producers, this mandates an influx of food safety workers and additional training. California Community Colleges is aligned with industry to respond.

In 2014-15, only 148 completed Food Technology and Animal Science programs to fill the 30,000 job openings related to food safety. To address this gap, the sector navigator and

several deputy sector navigators collaborated with colleges to provide:

- Good Ag Practices (GAP) training for farm workers and farmers in the San Joaquin Valley and Central Coast
- Safe Quality Food Training to workers in food processing facilities
- Internal Auditing Training to workers in cold storage and packing houses
- Hazard Analysis Critical Control Point (HACCP) Certification, composed of four introductory courses developed by instructors statewide

Work will continue to develop competencies in food safety protocols for incumbent workers and traditional students.

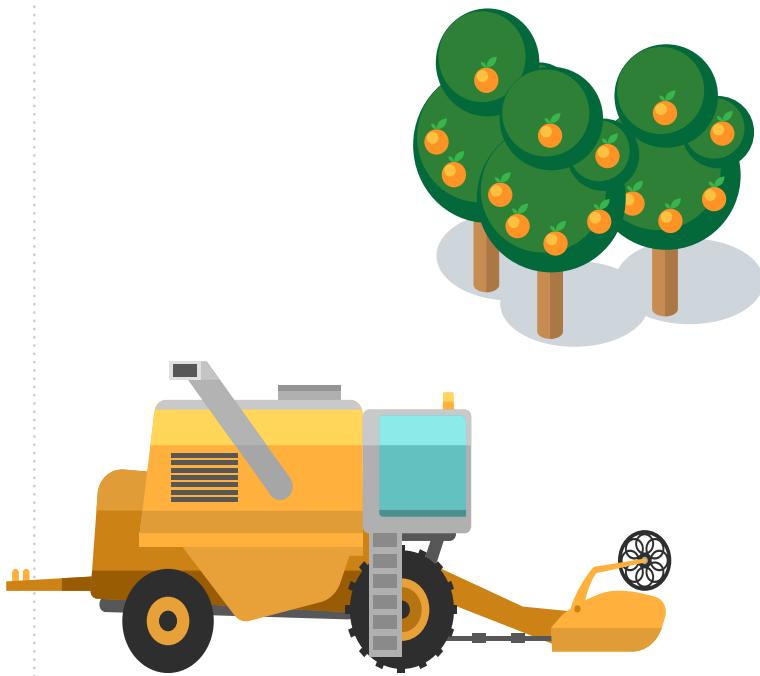


Photo Credit: (top) San Diego City College, (bottom) De Anza College



# AGRICULTURE, WATER & ENVIRONMENTAL TECHNOLOGIES

## DATA SOURCES:

<http://www.careersinpublichealth.net/careers/food-inspector>

<https://www.cdfa.ca.gov/Statistics/pdfs/AgExports2015-2016.pdf>







## ADVANCED TRANSPORTATION & RENEWABLE ENERGY

**Sector Navigator Peter Davis**

[www.4NRG.org](http://www.4NRG.org)

**Sector Highlights**



Advanced Transportation and Renewable Energy (ATRE) represents an array of clean energy technologies – including solar, geothermal, wind and bioenergy – that comprise a critical part of California’s strategy to reduce its climate change impact and grow a robust green economy.

California has always been a world leader in clean energy, but to advance its competitiveness, it must have a superior workforce that can respond to rapidly changing technologies. California Community Colleges, through the ATRE sector, helps to fill the gap.

A state-level sector navigator and regionally focused deputy sector navigators align programs and curricula with the needs of regional sector employers, developing faculty collaboratives, connecting programs and employers, and producing related performance-based outcomes.



# \$6,000

On average, workers trained in advanced transportation and renewable energy technologies at a community college earned an additional \$6,000 over the three years following their training.

**116** wind projects are located in **9** counties in the San Francisco Bay, Inland Empire and San Diego/Imperial regions.



Statewide, college ATRE programs support **50** automotive-related programs, **14** aeronautics-related programs and **23** renewable energy programs.

# 24%

Solar photovoltaic installers will see 24 percent job growth from 2014 to 2024, triple that of other industries.

## OCCUPATIONAL TRENDS IN ADVANCED TRANSPORTATION & RENEWABLE ENERGY

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Automotive Service Technicians and Mechanics	84,272	1,115	6,835	7,950	2,650	\$37,690
First-Line Supervisors of Mechanics, Installers, and Repairers	42,391	1,357	2,591	3,948	1,316	\$71,053
Bus and Truck Mechanics and Diesel Engine Specialists	24,339	1,283	1,351	2,634	878	\$49,941
Aircraft Mechanics and Service Technicians	14,247	511	1,062	1,573	524	\$65,306
Solar Photovoltaic Installers	2,831	141	140	281	94	\$40,394
Avionics Technicians	1,991	79	106	185	62	\$69,409

### BEST PRACTICE

#### ENERGY STORAGE – CURRICULUM RESOURCES FOR TEACHING AN EMERGING TECHNOLOGY

*Larry McLaughlin, Deputy Sector Navigator*

Over the past two years, the energy storage industry has come into its own by demonstrating effectiveness in capturing renewable energy and supporting the stability of our grid. Nationally, 2015 was a breakout year as the market grew 243 percent by capacity with 221 megawatts installed over the course of the year – more than all of 2013 and 2014.

California continues to be a leader in developing this industry with multiple policies at the California Public Utilities Commission, the California Energy Commission and the California Independent System Operator Corporation encouraging a culture of growth. Notably, the mandate requiring the state's big three investor-owned utilities to procure 1.3 gigawatts of grid-connected energy storage by the end of the decade will continue to drive market growth and technology improvements in our state.

To ensure that our community colleges stay ahead of the curve in workforce preparation, the ATRE sector is building educational capacity throughout the state by training faculty and providing curriculum resources on energy storage topics. Inland Empire/Desert Region Deputy Sector Navigator Larry McLaughlin and his staff developed training resources for electrical, solar, building and automotive program instructors to use in introducing energy storage into classrooms and industry training venues. This set of resources consists of printed materials, PowerPoint presentation slides, structured lesson plans, readings and hands-on activities.



Photo Credit: (top) San Joaquin Delta College, (bottom) Los Angeles Trade-Technical College



# ADVANCED TRANSPORTATION & RENEWABLE ENERGY

## DATA SOURCES:

<http://www.atreducation.org/wp-content/uploads/2017/01/ATRE-Investment-Options.pdf>

<https://www.bls.gov/ooh/construction-and-extraction/solar-photovoltaic-installers.htm>

<http://www.atreducation.org/publications-the-atre-program-viewbook>







## ENERGY, CONSTRUCTION & UTILITIES

**Sector Navigator Jim Caldwell**

[www.ecusectordwm.com](http://www.ecusectordwm.com)

**Sector Highlights**



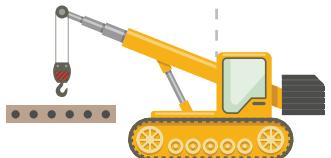
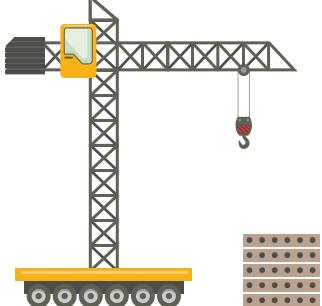
A collection of three industry clusters is engaged in deploying and managing technologies related to the generation, distribution, storage and efficient use of energy. They include:

- Energy efficiency, encompassing firms engaged in energy planning, installation and management with the purpose of making new and existing buildings more energy efficient.
- Construction, which propagates the skills necessary to make energy efficiency a reality through building and construction practices.
- Utilities that are primarily focused on generating, transmitting and delivering electric power; distributing natural gas and water and collecting and treating waste water.

The Energy, Construction and Utilities Sector (ECU) facilitates development of a workforce capable of compliance with California's greenhouse gas reduction mandates such as SB 350, the Clean Energy and Pollution Reduction Act (de Léon, 2015) and the Title 24 Building Energy Efficiency Standards. Informed by industry, the sector team collaborates with the colleges on faculty-driven talent pipelines to meet the state's needs for new workers and for incumbent workers with skills to keep pace with technology and standards evolution. Pipelines connect with students in K-12 and workforce investment board talent pools, providing career pathways, work-based learning, new courses and professional development for faculty.

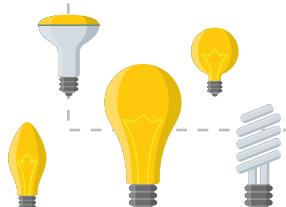
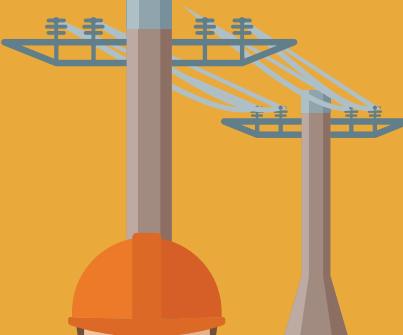
# 461,200

Energy, construction and utility industries account for more than 461,200 jobs and are projected to add almost 18,100 jobs by 2018.



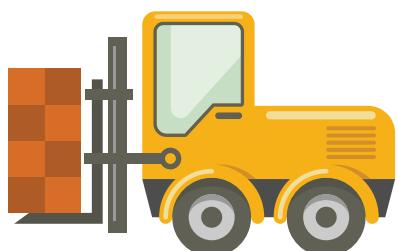
# 48,000

There are 48,000 energy, utility and energy efficiency-related businesses in California.



# \$11.2 BILLION

UC Berkeley forecasts about \$11.2 billion in public and private investments in energy efficiency in California by the year 2020.



## OCCUPATIONAL TRENDS IN ENERGY, CONSTRUCTION & UTILITIES

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Electricians	70,449	3,367	3,418	6,785	2,262	\$61,144
Carpenters	141,740	(2,687)	5,002	5,002	1,667	\$42,802
Plumbers, Pipefitters & Steamfitters	49,919	1,717	2,172	3,889	1,296	\$51,224
Heating, Air Conditioning & Refrigeration Mechanics/Installers	14,247	511	1,062	1,573	524	\$65,306
Construction Managers	28,992	1,304	1,480	2,784	928	\$47,702

### BEST PRACTICE

#### TALENT PIPELINES ALIGNED WITH INDUSTRY-RECOGNIZED CREDENTIALS

To best equip students with the skills necessary for in-demand jobs, the ECU team worked with industry and colleges to develop initiatives in the following fields:

- Heating, Ventilation, Air Conditioning and Refrigeration (HVACR):** The ECU team partnered with five southern California colleges to align student learning outcomes with competencies in an "employment ready" credential recommended by the Western HVAC Performance Alliance.

- High-Performance Building Operator**

**Professional:** A proposal by the ECU team secured funding from Southern California Edison, PG&E and the National Science Foundation to create a High-Performance Building Operator Professional training program at Laney College. This will enable a critical pipeline for energy efficiency market transformation and compliance with SB 350, serving the commercial real estate industry, the California Department of General Services and private owners of large buildings.

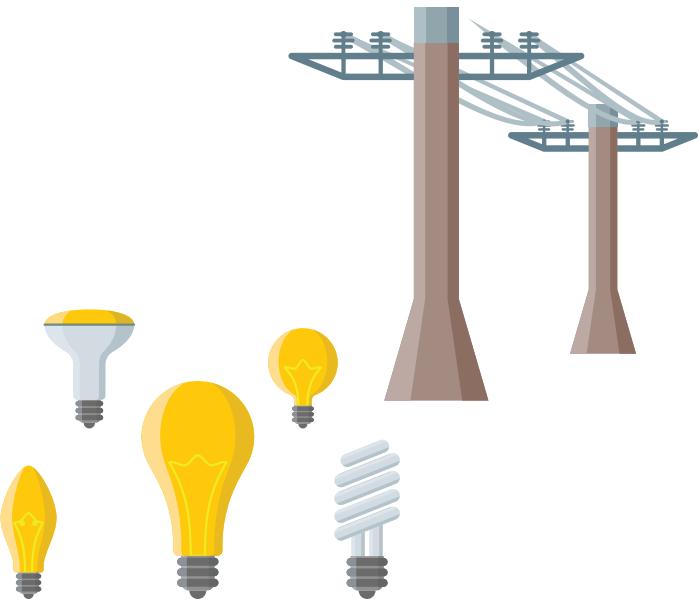
- Facility Management:** De Anza College's pilot program with the International Facility Management Association (IFMA) in 2016 proved effective for developing entry-level facility managers, an important step in bridging a supply/demand gap of approximately 6,000 workers across California. Based on this success, the ECU team is working to take this program statewide.



Photo Credit: (top) Long Beach City College



Photo Credit: (bottom) Butte College



# ENERGY, CONSTRUCTION & UTILITIES

## DATA SOURCE:

[http://bit.ly/CA\\_EnergySector](http://bit.ly/CA_EnergySector)







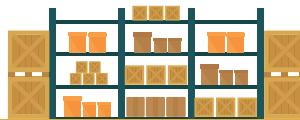
## GLOBAL TRADE & LOGISTICS



California is a global trade and logistics powerhouse, with 2015 exports hitting \$165.4 billion in American-made goods, the majority of which were manufactured products. It's estimated that more than 800,000 jobs are supported by California's exporting and importing of goods and services, licensing of technology and intellectual property, and investments across international boundaries — including logistics, finance, marketing and management of business processes to support trade.



# INTERNATIONAL TRADE SUPPORTS



**41 MILLION**  
Jobs Nationwide



**4.9 MILLION**  
Jobs in California



**20%**  
of California's workforce



**1 in 4**

One in four of all  
manufacturing jobs in  
California is dependent  
upon exports.



## OCCUPATIONAL TRENDS IN GLOBAL TRADE & LOGISTICS

Occupation*	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Sales Representatives, Wholesale and Manufacturing	160,726	5,815	11,515	17,330	5,777	\$52,728
Business Operations Specialists, All Other	137,643	5,348	5,068	10,416	3,472	\$74,721
Market Research Analysts and Marketing Specialists	91,297	6,658	3,425	10,083	3,361	\$72,434
Shipping, Receiving and Traffic Clerks	103,095	805	6,769	7,574	2,525	\$30,861
Sales Managers	72,657	1,477	5,227	6,704	2,235	\$109,923
Web Developers**	30,164	2,715	1,237	3,952	1,317	\$68,888
Cargo and Freight Agents	12,871	568	1,298	1,866	622	\$42,968
Logisticians	16,167	457	686	1,143	381	\$83,313

\*Within these traditional occupations, some portion of each may support global trade or require global trade expertise. Related job titles found within these occupations include accounting analysts, import clerks, public relations specialists, social media specialists, financial analysts, e-commerce managers, customs brokers, social media managers and international banking specialists.

\*\*Also listed in Information & Communications Technology/Digital Media (ICT-DM)

### CALIFORNIA COMMUNITY COLLEGES' CENTERS FOR INTERNATIONAL TRADE DEVELOPMENT (CITD) SUPPORT THE WORK OF GLOBAL TRADE AND LOGISTICS ORGANIZATIONS BY:

- Supporting their global expansion and identifying their needs relative to international business

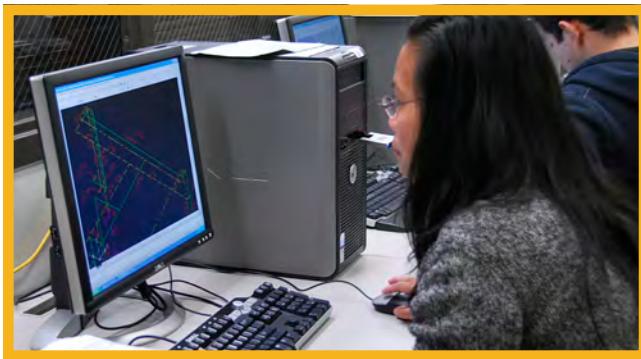
- Providing partnership development opportunities with other agencies, employer groups, and business associations related to global trade
- Delivering current and relevant training to help incumbent and prospective workers become more globally competitive

### BEST PRACTICE STATE TRADE EXPANSION PROGRAM (STEP)

The State Trade Expansion Program (STEP) is designed to help increase the number of small businesses that export and to raise the value of exports for those small businesses that currently export so they can grow and create jobs. Activities include support for qualified small businesses to participate in international trade shows, trade missions and other export promotion activities.



Photo Credit: (top) Lake Tahoe Community College, (bottom) Los Angeles Trade-Technical College



# GLOBAL TRADE & LOGISTICS

## DATA SOURCES:

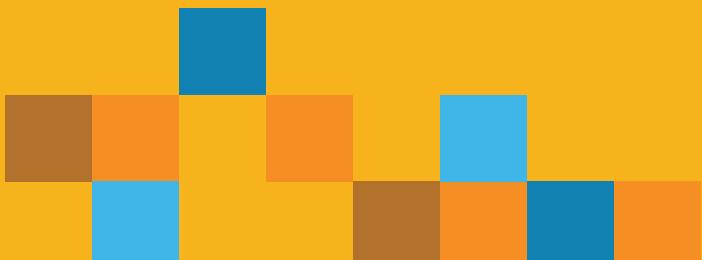
[http://bit.ly/LA\\_trade\\_and\\_logistics](http://bit.ly/LA_trade_and_logistics)

[https://beaconecon.com/products/trade\\_report](https://beaconecon.com/products/trade_report)

<https://www.census.gov/foreign-trade/statistics/state/data/ca.html>

<https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2015/march/unlocking-economic-opportunity>

<http://businessroundtable.org/resources/trade-and-american-jobs-2016-update>







## HEALTH CARE

**Sector Navigator Linda Zorn**

[www.ca-hwi.org](http://www.ca-hwi.org)

**Sector Highlights**



Demand for skilled health care workers is widespread nationwide and particularly in California. The Public Policy Institute of California estimates that by 2024, the state will need an additional 190,000 allied healthcare workers, including licensed vocational nurses, certified nursing assistants, medical assistants, imaging technologists, dental hygienists and dental assistants.

To develop innovative solutions for addressing the shortage, the Health Workforce Initiative sector navigator and deputy sector navigators maintain close collaborations with colleges and industry professionals.

Colleges benefit by receiving professional development for faculty and staff and technical assistance with program and curriculum development and/or revision; convening of faculty collaboratives; and connecting with industry through program advisory structures.

Health care employers and employees benefit from incumbent worker training, professional development for licensure renewal, labor market analysis to determine needs and gaps, and subsequent strategy development on meeting workforce needs identified in the analysis.



# 15%

Openings for medical records and health information technicians are expected to grow 15 percent between 2014 and 2024.



# 43%

One of the fastest-growing allied health care professions is occupational therapy assistant with a projected 42.7 percent increase by 2024.



# \$56,950

Median wage for occupational therapy assistants in 2014 was \$56,950.



Required level of education to become an occupational therapy assistant: **associate degree**.

## OCCUPATIONAL TRENDS IN HEALTH CARE

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Registered Nurses	284,150	17,828	21,405	39,233	13,078	\$102,030
Nursing Assistants	112,306	13,180	8,237	21,417	7,139	\$29,483
Licensed Practical & Vocational Nurses	73,837	6,278	6,875	13,153	4,384	\$51,275
Medical Assistants	90,654	6,935	6,096	13,031	4,344	\$34,427
Dental Assistants	52,833	2,425	4,045	6,470	2,157	\$38,198

## BEST PRACTICES

- **Health and Science Pipeline Initiative (HASPI)** is a statewide project to support middle and high schools in implementing science-based health pathway programs to increase student performance and strengthen transition and retention rates in community college programs. HASPI is the program being used for the health sector component of the California Career Pathway Trust grants. Outcomes included 18 HAPSI workshops/ events and 872 participants.
- **Healthcare Information Technology (HIT) Specialist** is facilitated by Paula Hodge, DSN in the ICT/DM Sector and John Cordova, DSN in the Health Sector. This is a cross-functional initiative that addresses the emerging need for updated skills for entry-level workers such as help desk coordinators, information technicians, medical assistants, certified nurses aides and/or other entry level workers. The collaboration included partners statewide, including leaders from the American Health Information Management Association and Healthcare Information and Management Systems Society.
- **Critical Care Specialty Training for Registered Nurses** is an important initiative to help close the skills gap for this profession.



Photo Credit: West Valley College

This program in Orange County is in its 12th year and reports more than 500 completers. What makes the program unique is the additional use of high-fidelity simulation experiences that allow for experiential learning of clinical and decision making skills. Nursing managers report that the course provides skills required to provide safe, competent care to critically ill patients and is a service that hospitals could not duplicate themselves.

- **Ambulatory Care Specialty Training** for registered nurses addresses an increasing need in the San Diego/Imperial region. HWI hired industry partner Lisa Duncan, BSN, MBA, RN-C, CIC, to create and deliver an Ambulatory Care Nurse Certification Review Course. The first session in June 2016 served 17 nurses from organizations such as Kaiser Permanente, UC San Diego, Scripps and Family Health Centers of San Diego, and received excellent reviews.
- An annual event since 2011, the **Career Summer Institute in Mental Health** in the South Bay area allows high school and college students to explore mental health careers and to experience "hands on" communication techniques used in group sessions. They complete the program with a certification in Mental Health First Aid. The administration at one of the participating high schools reported that high-risk students who participated in the program ultimately graduated from high school.

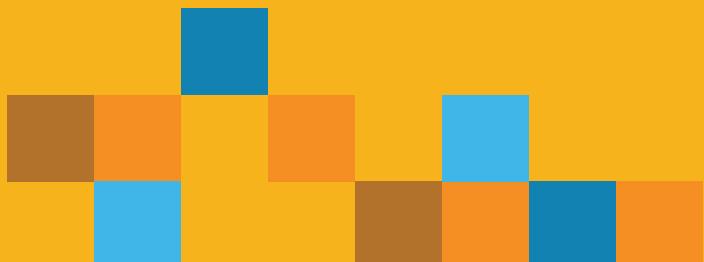
*"...high-risk students who participated in the program ultimately graduated from high school."*

# HEALTH CARE

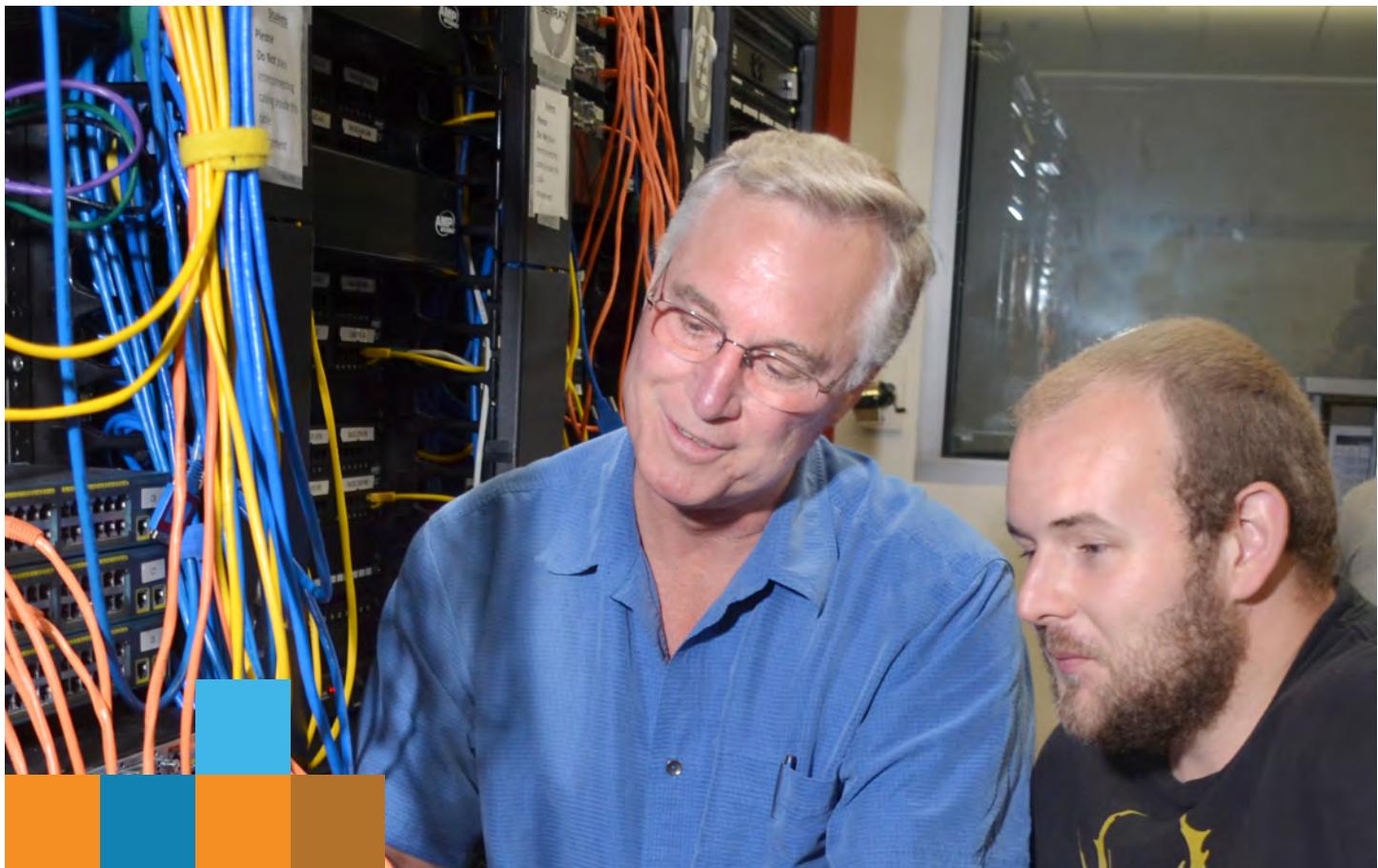
## DATA SOURCES:

<https://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm>

<https://www.bls.gov/news.release/pdf/ecopro.pdf>







## INFORMATION AND COMMUNICATION TECHNOLOGIES

**Sector Navigator Stephen Wright**

[www.ict-dm.net](http://www.ict-dm.net)

**Sector Highlights**



California faces a continuously rapid evolution of technology that renders the in-demand skills of today to the minimum skills of tomorrow. Employers have a tremendous need for workers with up-to-the-minute skills in computers, software, networking, telecommunications; internet, programming and information systems technologies including hardware, software, digital media and services.

The Information and Communication Technologies/Digital Media sector identifies, verifies and promotes effective strategies and pathways necessary to build the pipeline of Information Technology workers, and contributes to accelerated student outcomes by helping colleges acquire the technology to train students remotely and providing faculty development and system support.



# 39 %

39 percent of California's job openings from 2012 to 2022 will be ICT-related, including computer systems analysts, software developers, systems software experts, market research analysts, web developers and information security analysts.



# 27 %

Another 27 percent of jobs will require business skills relying on information systems and office applications software.

## OCCUPATIONAL TRENDS IN INFORMATION AND COMMUNICATION TECHNOLOGIES/DIGITAL MEDIA

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Computer User Support Specialists	76,353	5,179	3,086	8,265	2,755	\$58,241
Network & Computer Systems Administrators	47,679	2,371	1,991	4,362	1,454	\$88,597
Web Developers	30,164	2,715	1,237	3,952	1,317	\$68,888
Computer Network Support Specialists	23,162	1,304	929	2,233	744	\$73,950
Multimedia Artists & Animators	14,197	324	806	1,130	377	\$65,543

### BEST PRACTICES

#### MAXIMUM LEVERAGE OF RESOURCES AND RETURN ON INVESTMENT

- In addition to a variety of services the ICT/Digital Media Priority Sector successfully delivers, the ones noted below address regional and statewide model and scalability of programs.

#### COMPUTER SCIENCE/SOFTWARE DEVELOPMENT

- Update Transfer Model Curriculum (TMC) in Computer Science to increase transfer processes for software development careers
- Project manage TMC C-ID conversion at colleges
- Model and replicate successful Articulation Alliances, like CSin3 at Hartnell/CSU
- Communicate adult learner pathways to Software Development through CCCs to close critical skills gap (SD Edge)
- Expand SD EDGE program, a Bay Regional website for efficient search of all 28 regional colleges to find relevant pathway course offerings and expand statewide
- Update faculty computer science skills with training

#### INFORMATION TECHNOLOGY (IT) – NETWORKING/INFRASTRUCTURE

- Develop and secure pilot for Bachelor's of Applied Science – IT Networking to accommodate growing demand for IT professionals
- Model and replicate successful Articulation Alliances (ex. CSU San Bernardino IT BS)
- Expand successful HS CyberPatriots Programs statewide to encourage under-represented minorities to participate in IT

- Expand CCC ITTP Program to accommodate increasing students from HS CyberPatriot program
- Manager NetLab+ User Group and website for CCC faculty using this successful 24/7, low-cost computer lab alternative (\* separate \$13M equip/org request through BACCC)
- Update faculty skills with three training conferences per year
- Develop and deploy advanced certificate programs for experienced IT professionals (e.g. B2B Sales, or Rockwell instrumentation)
- Internship and interview program coordination statewide to influence businesses utilizing LaunchPath (CCCF) and AWE Programs

#### BUSINESS INFORMATION SERVICES

- Expand successful BIW 1, 2 and Specialist program with proactive enrollment
- Focus on Microsoft Office Specialist Digital Badge attainment in BIW Series
- Expand placement support to agencies statewide

#### DIGITAL MEDIA

- Provide critical faculty training in expanded uses of digital media as middle skill in hybrid business needs
- Develop adult "retool" certification to accommodate the rapidly changing work/office environment
- Develop more integrated curricula paths with business and sciences for student training

#### ENTERTAINMENT

- Develop entry, growth and exit pathways and share on LA Regional website for efficient search of all 28 regional colleges.
- Expand Ent EDGE to statewide

# INFORMATION AND COMMUNICATION TECHNOLOGIES

## DATA SOURCES:

[http://bit.ly/CA\\_ITTechnicianPathway](http://bit.ly/CA_ITTechnicianPathway)







## LIFE SCIENCES / BIOTECHNOLOGY

**Sector Navigator Sandra Slivka**

[www.calbiotechcareers.org](http://www.calbiotechcareers.org)

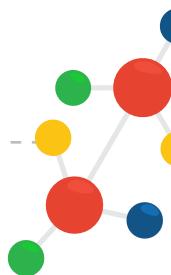
**Sector Highlights**



Life Sciences / Biotechnology encompasses a group of diverse industries, including agriculture feedstock and chemicals, drugs and pharmaceuticals, medical devices and equipment, research testing and medical laboratories, and bioscience-related distribution. All have a common link: the application of biological scientific knowledge to make products that are useful to humans.

Development of this sector provides excellent workforce opportunities for California's community college students, as a Centers of Excellence Labor Market Information study predicts 6,000 middle-skills jobs and 17,000 "pathway jobs" (requiring BS degrees) over the next five years. To meet this need, there are 34 active community college degree and certificate programs that support workforce readiness and provide pathways to the Baccalaureate of Science degrees in Bio-Manufacturing programs scheduled to launch at Solano College and Mira Costa College in 2017.

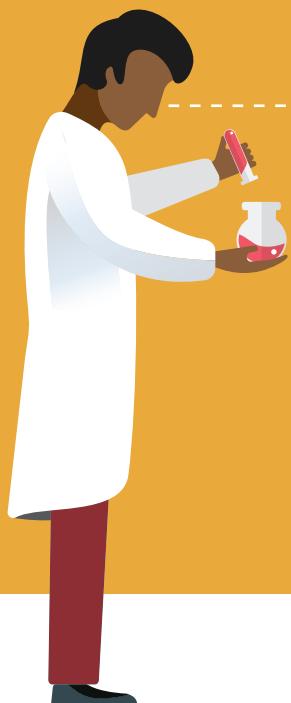
Additionally, many Life Sciences / Biotechnology jobs require quality and regulatory skills, but general education biology and/or chemistry at California community colleges and four-year universities do not prepare students accordingly. Thus, Life Sciences / Biotechnology strives to meet this workforce need.



# 502

## MORE TECHNICIANS

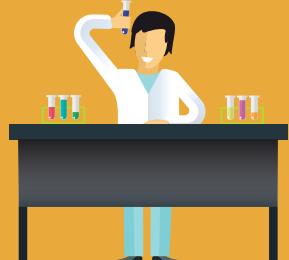
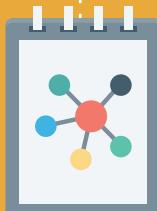
Los Angeles County projects hiring an additional 502 medical and clinical laboratory technicians by 2020.



# 1,872

## Annual Job Openings

Statewide there are 1,872 annual openings in sales, wholesale and manufacturing positions related to life sciences.



# 235,000

## Life Sciences/ Biotechnology Jobs

California has the largest life sciences/biotechnology employment base in the U.S. with more than 235,000 jobs, spanning more than 8,000 individual business establishments.



## OCCUPATIONAL TRENDS IN LIFE SCIENCES/BIOTECHNOLOGY

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Sales Representatives, Wholesale/Mfg, Technical & Scientific Products	51,800	2,152	3,460	5,612	1,871	\$78,790
Medical & Clinical Laboratory Technicians	19,262	1,267	1,443	2,710	903	\$46,036
Biological Techs	13,367	650	1,155	1,805	602	\$51,503
Medical & Clinical Laboratory Technologists	12,076	792	906	1,698	566	\$83,064
Chemical Techs	6,275	226	575	801	267	\$44,362

## BEST PRACTICES

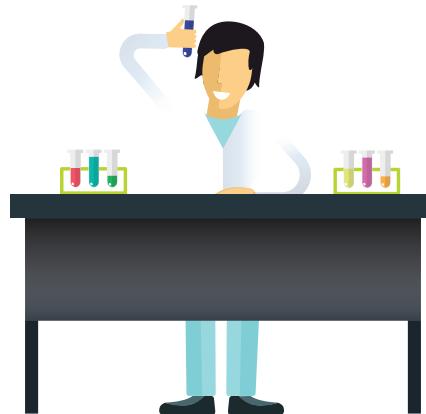
### INDUSTRY ALIGNMENT

#### AND THIRD PARTY CREDENTIALS

- Program alignment to industry needs through third-party credentials or licensure is important to increase the capacity to deliver industry-relevant training with in-demand skills sets, improve outreach to students, improve program visibility with industry, and increase industry engagement with community colleges.

#### EXAMPLES OF DEVELOPMENT OR ALIGNMENT TO CREDENTIALS INCLUDE:

- Employability Milestone:** For most California Community Colleges Life Science / Biotechnology programs, there is no third-party credential or licensure. So, a collaborative effort resulted in the "Employability Milestone," which is a skill set thoroughly vetted and approved by industry and faculty. Classes leading to this milestone are categorized as Lab Skills I and II. Aligned classes teach similar skill sets and provide adequate hands-on lab hours to prepare students for entry-level employment. Alignment of biotechnology programs is 76 percent complete.



- Medical Laboratory Technology:** These programs are 100 percent aligned to state and national licensures. CDPH/LFS (California Department of Public Health/Laboratory Field Services) and/or NAACLS (National Accrediting Agency for Clinical Laboratory Sciences) provides accreditation. CDPH also accredits programs that lead to licensure for HT-ASCP (Histotechnician - American Society of Clinical Pathology) certification.
- Third party credentialing in Quality to serve Advanced Manufacturing:** An industry-recognized third party credential, the Certified Quality Improvement Associate (CQIA) Certification from the American Society for Quality (ASQ) requires two years of college or two years of work experience and successful completion of the certification exam. With assistance from the initiative, community colleges are developing the capacity to prepare students for the CQIA certification. The CQIA certification also prepares students for the Quality/Regulatory Registered Apprenticeship program recently funded through the Innovate Industry Apprenticeship Grant from the Chancellor's Office.



Photo Credit: Cuyamaca College

# LIFE SCIENCES / BIOTECHNOLOGY

## DATA SOURCES:

[http://bit.ly/LA\\_health\\_services](http://bit.ly/LA_health_services)

[http://www.calbiotechcareers.org/wp-content/uploads/2014/11/LS-Biotech-Middle-Skills-Jobs-in-CA\\_Report\\_Oct-2014.pdf](http://www.calbiotechcareers.org/wp-content/uploads/2014/11/LS-Biotech-Middle-Skills-Jobs-in-CA_Report_Oct-2014.pdf)







## RETAIL/HOSPITALITY/TOURISM

**Sector Navigator Philip Sutton**

[www.californiarht.com](http://www.californiarht.com)

**Sector Highlights**



The retail, hospitality and tourism sector – with subsectors including food services, accommodation, activities/amusement and transportation – is vital for California, with 2017 expenditures projected to top \$129 billion. California Community Colleges supports the sector with a full complement of work-ready certificates, credentials, and associate degrees in retail management, fashion design and merchandising, e-commerce, culinary arts, nutrition, restaurant and food services, travel services and tourism, hospitality, massage therapy, lodging management, resort operations and management, small business, entrepreneurship and more.

Additionally, the Retail/Hospitality/Tourism “Learn and Earn” Sector supports employers through specific programs teaching highly valued interpersonal and soft skills, advanced workplace skills, technical knowledge and industry-specific skills. Colleges benefit from collaboratives facilitated by the sector navigator and deputy sector navigators that support curriculum development, professional development and faculty training.



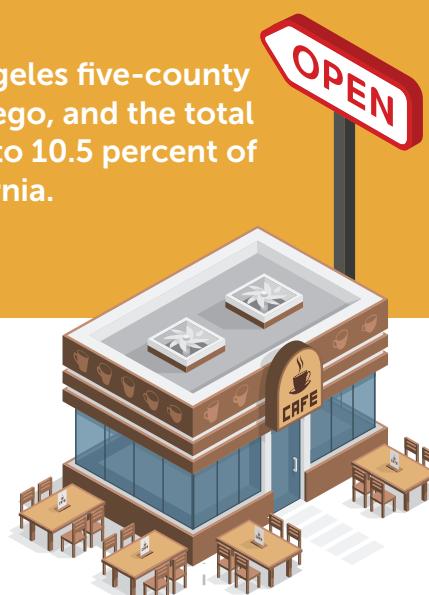
# 12%

Leisure and hospitality jobs account for about 12 percent of all wage and salary jobs in California.



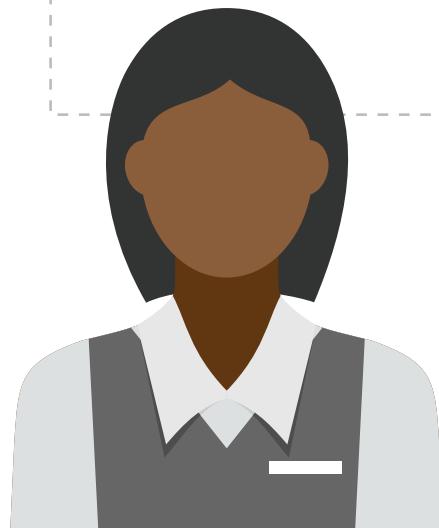
# 929,000+

In 2015, there were 782,100 retail workers in the Los Angeles five-county area, an increase of 1.5 percent over 2014. Add in San Diego, and the total job count increases to more than 929,000. This equates to 10.5 percent of all nonfarm payroll jobs in Southern California.



# 1.9 MILLION

Leisure and hospitality employment grew by 3 percent in 2016 to 1.9 million jobs. The sector added 55,300 jobs over the course of 2016.



## OCCUPATIONAL TRENDS IN RETAIL/HOSPITALITY/TOURISM

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Recreation Workers	54,971	4,067	3,221	7,288	2,429	\$26,271
Human Resources Specialists	61,498	2,204	4,823	7,027	2,342	\$66,725
Administrative Services Managers	44,441	1,517	2,554	4,071	1,357	\$92,257
Meeting, Convention & Event Planners	13,581	975	516	1,491	497	\$50,554
Advertising & Promotions Managers	4,483	138	438	576	192	\$92,265

### BEST PRACTICE

#### BRIDGE PROGRAM: CAREER PATHWAY TRANSITION PARTNERSHIPS WITH ADULT SCHOOLS

In an effort to open retail, hospitality and tourism career opportunities to adult learners and help them transition into related college-level courses, Deputy Sector Navigator Andrea Vizenor partnered with Skyline College, the San Mateo Adult Education College and Career Leadership (ACCEL) consortium, and 20 industry representatives to develop a Bridge Program that includes:

- **Hospitality ADVANCE**, a 48-hour bridge training course consisting of 12 modules.
- **Introduction to College**, offered upon



Photo Credit: (top) Fullerton College, (bottom) San Diego City College



completion of Hospitality ADVANCE, which includes a tour of Skyline College to learn about the many programs and services available.

- **Internship and Workforce Readiness Training** experience that embeds course work and experiences that allow students to earn 1.5 units of college credit and three industry-recognized credentials. Upon completion, students can apply for a paid six-week internship experience with Bon Appetit located on the Google corporate campus in Mountain View.
- Other pre-college and ESL (English as a second language) experiences to help alleviate transitioning from the Adult School to a college campus are also offered.

The Skyline College model is not only relevant to careers in retail, hospitality and tourism but can be adapted to the other priority sectors of the Doing What MATTERS for Jobs and the Economy framework. The model assists in addressing the Strong Workforce Program's guiding recommendations for Career Pathways by "contextualizing workplace readiness skills into pathway curricula in collaboration with faculty" and "supporting the development of study tools for bridging from high school and adult education preparation into community college CTE pathways in order to help community college students plan their CTE course taking."



# RETAIL/HOSPITALITY/TOURISM

## DATA SOURCES:

<http://laedc.org/wp-content/uploads/2016/02/LAEDC-2016-2017-February-Forecast.pdf>

<http://www.calmis.ca.gov/file/lfmonth/Employment-Highlights.pdf>





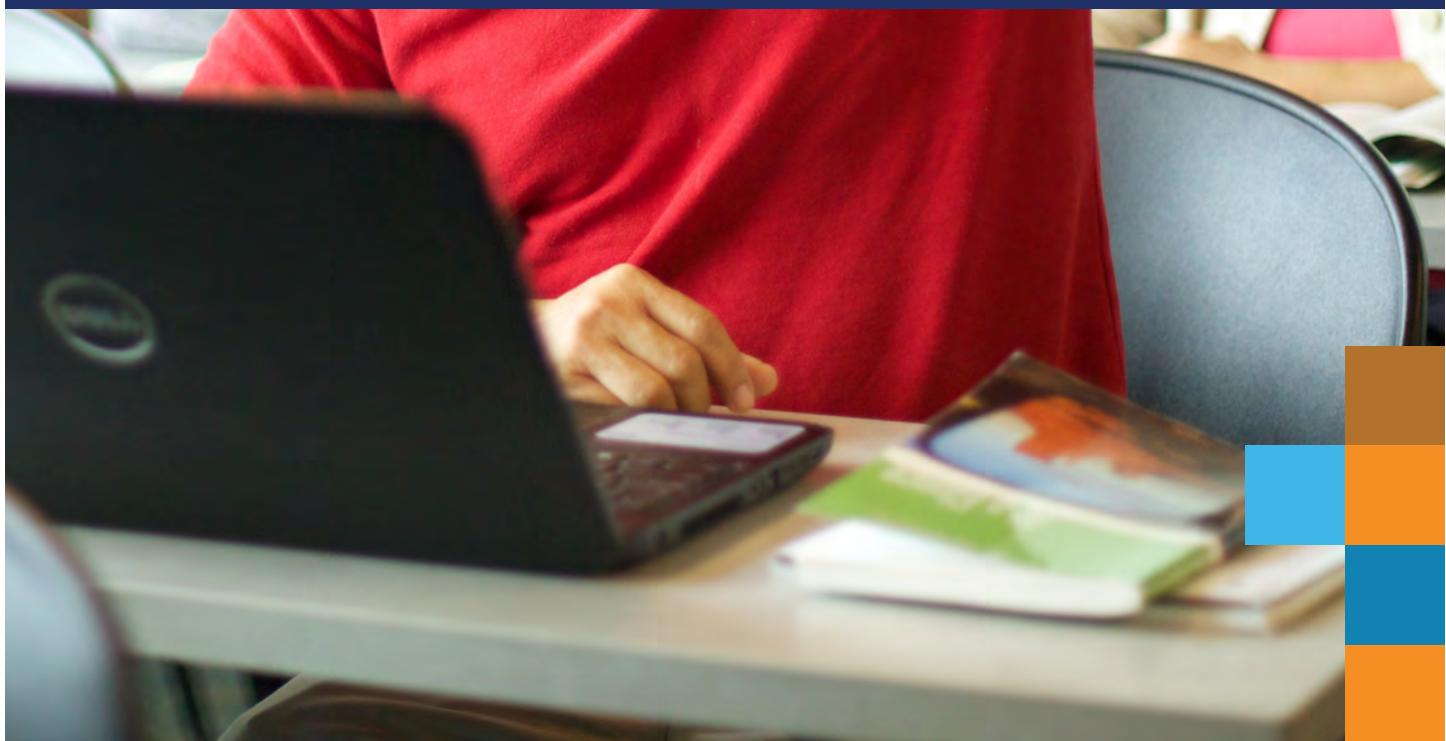


## SMALL BUSINESS

**Sector Navigator Charles Eason**

[www.smallbusinesssector.net](http://www.smallbusinesssector.net)

**Sector Highlights**



Small business is the backbone of California's economy. Using the Small Business Administration's (SBA) definition of a small business (fewer than 500 employees), small businesses account for 80 percent of employment in California, with 70 percent of California businesses having fewer than five employees. According to the Bureau of Labor Statistics and a report from Intuit, by 2020, more than 40 percent of American workers, or 7.6 million people, will be own their own small business owners as freelancers, contractors and temp workers as part of the "gig economy."

To help nurture the California entrepreneurial spirit and deliver a job-ready workforce to small businesses, the Small Business Sector Navigator and Deputy Sector Navigators work with experts from industry and education to develop contextualized training for incumbent workers and specialized entrepreneurship and small business curriculum that can be infused into existing California Community Colleges programs.

# 11TH

California ranked 11th among the nation's 25 largest states for entrepreneurship growth in 2016.



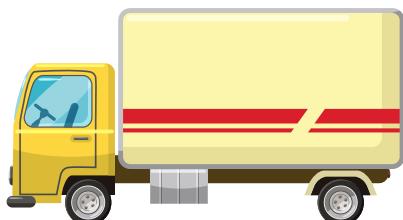
# 48%

48 percent of California small businesses remain in operation after five years.



# 7%

In 2016, 7 percent of adult Californians operated their own small business, placing it 9th of the 25 largest states.



## OCCUPATIONAL TRENDS IN SMALL BUSINESS

Occupation	2016 Jobs	Projected Change	Replacements	Total Openings	Annual Openings	Median Annual Wages
Office Clerks, General	384,304	12,539	25,429	37,968	12,656	\$33,177
First-Line Supervisors of Office & Administrative Support Workers	189,463	7,059	8,929	15,988	5,329	\$56,997
Bookkeeping, Accounting & Auditing Clerks	212,104	(1,353)	6,284	6,284	2,095	\$42,322
Payroll and Timekeeping Clerks	28,372	141	2,315	2,456	819	\$45,719
Human Resources Assistants	18,398	362	633	995	332	\$42,824

### BEST PRACTICE VIRTUAL ENTERPRISE

The Small Business Sector provides support for Virtual Enterprise, an in-school, live, global business simulation that prepares high school students for college and career through project-based, collaborative learning and the development of 21st-century skills in entrepreneurship, global business, problem solving, communication, personal finance and technology.

Virtual Enterprise replicates all businesses functions in both structure and practice. Under the guidance of a teacher-facilitator and business mentors, students create and manage their virtual businesses from product development,

production and distribution, to marketing, sales, human resources, accounting/finance and web design.

Structured with the assistance of the California Community Colleges Small Business Sector, competitions require students to write business plans, develop market research strategies, create websites, pay wages and taxes, and sell their virtual services and products to each other using virtual bank accounts.

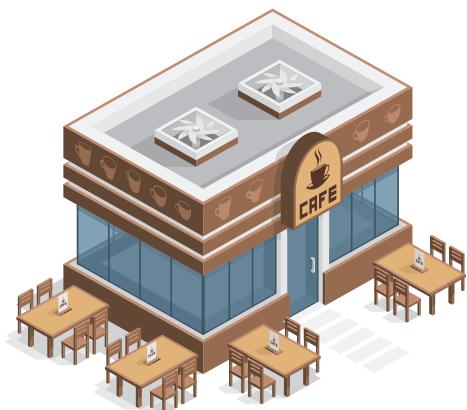


Photo Credit: Long Beach City College

***"We were delighted to support this Virtual Enterprise Trade Show Competition. The project-based model replicates the functions of real businesses and offers the soft-skill set that business owners are looking for."***

***Joe Molina, Small Business Deputy Sector Navigator for the San Diego Region***

# SMALL BUSINESS

## DATA SOURCES:

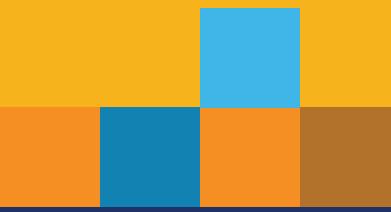
[http://www.kauffman.org/microsites/kauffman-index/rankings/  
state?Report=MainStreet&Indicator=LRank](http://www.kauffman.org/microsites/kauffman-index/rankings/state?Report=MainStreet&Indicator=LRank)

[http://www.kauffman.org/microsites/kauffman-index/rankings/  
state?Report=GrowthEntrepreneurship&Indicator=LRank](http://www.kauffman.org/microsites/kauffman-index/rankings/state?Report=GrowthEntrepreneurship&Indicator=LRank)

[http://www.labormarketinfo.edd.ca.gov/LMID/Size\\_of\\_Business\\_Data\\_for\\_CA.html](http://www.labormarketinfo.edd.ca.gov/LMID/Size_of_Business_Data_for_CA.html)  
California Employment Development Department (EDD)

[http://investors.intuit.com/press-releases/press-release-details/2015/Intuit-Forecast-76-  
Million-People-in-On-Demand-Economy-by-2020/default.aspx](http://investors.intuit.com/press-releases/press-release-details/2015/Intuit-Forecast-76-Million-People-in-On-Demand-Economy-by-2020/default.aspx)

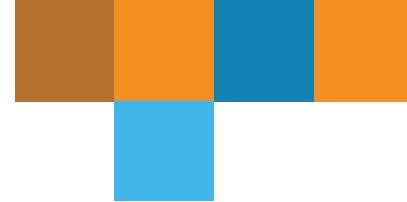




## APPENDIX B

### ECONOMIC & WORKFORCE DEVELOPMENT PROGRAM TEAM





## ECONOMIC AND WORKFORCE DEVELOPMENT PROGRAM TEAM

### CHANCELLOR'S OFFICE

Role	Name	Contact Info
Vice Chancellor, Workforce & Economic Development	Van Ton-Quinlivan	916.327.5492, vtquinlivan@cccco.edu @WorkforceVan For Appointments: Faye James 916.323.4990, fjames@cccco.edu
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Dean, Innovation and Quality Practices	Gary W. Adams	916.322.7079 gadams@cccco.edu
Dean	Dr. Jeffrey A. Mrizek	916.325.5935 jmrizek@cccco.edu
Dean, Field Operations	Dr. Matthew Roberts	916.445.7692 mroberts@cccco.edu
Dean, Policy Alignment & Outreach	Javier Romero	916.322.1677 jromero@cccco.edu
Staff Services Manager	Nita Patel	916.327.6226 npatel@cccco.edu
Visiting Faculty	Dr. Lynn Shaw	562.708.3803 lshaw@cccco.edu
Visiting Counselor	Lynell Wiggins	323.445.5940 lwiggins@cccco.edu



## INDUSTRY PRIORITY SECTORS, SECTOR NAVIGATORS AND DEPUTY SECTOR NAVIGATORS

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Advanced Manufacturing</b>	<p>Jose Anaya 310.973.3163 janaya@elcamino.edu makingitincalifornia.com</p>	Region A Northern Inland Northern Coastal Greater Sacramento	<p>Carol Pepper-Kittredge (Sacramento) 916.660.7801 cpepper-kittredge@sierracollege.edu</p> <p>Charlie Pooler (Northern Coastal, Northern Inland) 530.242.7627 cpooler@shastacollege.edu</p>
		Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	<p>Mark Martin 510.464.3444 mark.martin@design4x.com</p>
		Region C Central Valley, Mother Lode	<p>Gurminder Sangha 559.688.3047 gurminders@cos.edu Twitter: @gurminder2014</p>
		Region D South Central Coast	<p>Michael Bastine 661.362.3111 michael.bastine@canyons.edu</p>
		Region E San Diego/Imperial	<p>Trudy Gerald 619.388.3522 tgerald@sdccd.edu</p>
		Region F Inland Empire Desert	<p>Alan Braggins Alan.Braggins@chaffey.edu Twitter: @DSN_Alan</p>
		Region G Los Angeles Orange County	<p>Ben Traina (Los Angeles) 310.973.3170 btraina@elcamino.edu</p> <p>Norma A. Alvarado (Orange County) 714.808.4611 nalvarado@sce.edu</p>

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Advanced Transportation &amp; Renewables</b>	Peter Davis 619.473.0090 outrchpd@me.com atreeducation.org	Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	Gerald W. Bernstein 415.550.4437 gbernste@ccsf.edu
		Region E San Diego / Imperial	Gregory M. Newhouse 619.388.7673 gnewhous@sdccd.edu
		Region F Inland Empire Desert	Larry McLaughlin 760.773.2595 lmclaughlin@collegeofthedesert.edu
		Region G Los Angeles Orange County	Jannet Malig 562.860.2451 x2912 jmalig@cerritos.edu
<b>Agriculture, Water &amp; Environmental Technologies</b>	Nancy Gutierrez 559.637.2530 nancy.gutierrez@reedleycollege.edu calagcc.org	Region A Northern Inland Northern Coastal Greater Sacramento	Heather Kelnhofer 530.242.7636 hkelnhofer@shastacollege.edu  Carrie Peterson interim through 7/1/2017 530.668.2531 or 209.602.4288 cpeterso@yccd.edu  Julie Blacklock on leave through 7/1/2017 530.668.2531 jblacklo@yccd.edu Twitter: @JulieBlacklock1
		Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	David Esmaili 408.741.4693 david.esmaili@westvalley.edu
		Region C Central Valley, Mother Lode	Lori Marchy 209.575.6449 marchyl@yosemite.edu
		Region D South Central Coast	Holly Nolan Chavez 805.922.6966 x5276 hchavez@hancockcollege.edu

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Energy, Construction &amp; Utilities</b>	Jim Caldwell 925.899.2665 jcaldwell @workforceincubator.org ecusectordwm.com	Region A Northern Inland Northern Coastal Greater Sacramento  Region B SF / San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey  Region C Central Valley, Mother Lode  Region D South Central Coast  Region E San Diego/Imperial  Region F Inland Empire Desert  Region G Los Angeles Orange County	Prop 39 Project Director Orion Walker 707.468.3224 owalker@mendocino.edu  Jamie Orr 650.793.5739 OrrJamie@fhda.edu  Prop 39 Project Director Mark Williams 925.858-5990 (cell) markwilliams-env@hotmail.com  Prop 39 Project Director David Teasdale 661.477.5447 dteasdal@kccd.edu  Prop 39 Project Director David Teasdale 661.477.5447 dteasdal@kccd.edu  Prop 39 Project Director Jonathan Kropp 619.660.4045 jonathan_kropp@gcccd.edu  Prop 39 Project Director Jon Caffery 760.668.4370 (cell) jcaffery@collegeofthedesert.edu  Bruce Noble (Los Angeles) 949.300.3345 bruce.noble@riohondo.edu  Len Pettis (Orange) 949.451.5602 lpettis99@ivc.edu  Prop 39 Project Director Christie Dam 213.763.7075 prop39@lattc.edu

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Global Trade &amp; Logistics</b>	Jeffrey Williamson 951.571.6458 jeff.williamson@rccd.edu californiastep.org  <a href="#">more info »</a>	Region A Northern Inland Northern Coastal Greater Sacramento	Angela Cordell 916.205.6473 acordell@frc.edu
		Region B SF/San Mateo, East Bay Silicon Valley, North Bay, Santa Cruz/Monterey	Brooks Ohlson 916.563.3222 Ohlsonb@losrios.edu
		Region C Central Valley, Mother Lode	Petural "PJ" Shelton 925.575.0484 pshelton@peralta.edu
		Region D South Central Coast	Yvonne Reid 650.738.7117 Reidy@smccd.edu
		Region E San Diego/Imperial	Jeanette Benson 209.384.5892 merced@elite.net
		Region F Inland Empire Desert	Julie Samson 805.965.0581 x 3643 jasamson@sbcc.edu
		Region G Los Angeles, Orange County	Victor Castillo 619.482.6494 vcastillo@swccd.edu
			Robert Corona 951.571.6443 robert.corona@rccd.edu
			Leah Goold-Haws (Los Angeles) 562.938.3240 lgoold-haws@lbcc.edu
			Lynn Stewart (Orange County) 714.564.5419 Stewart_Lynn@rsccd.edu

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Health</b>	Linda Zorn 530.879.9069 zornli@butte.edu ca-hwi.org	Region A Northern Inland Northern Coastal Greater Sacramento	Trudy L. Old 530.879.9049 oldtr@butte.edu  Sue Hussey 916.650.2767 husseys@scc.losrios.edu
	Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	Cynthia Harrison 408.855.5340 or 408.855.5215 cynthia.harrison@wvm.edu	
	Region C Central Valley, Mother Lode	Valerie Fisher 559.737.6252 valerief@cos.edu	
	Region D South Central Coast	John Cordova 661.259.7800 x3074 562.505.4409 (cell) john.cordova@canyons.edu	
	Region E San Diego/Imperial	Ann Durham 619.644.7057 ann.durham@gcccd.edu	
	Region F Inland Empire Desert	Avanté E. Simmons 760.636.7945 asimmons@collegeofthedesert.edu	
	Region G Los Angeles Orange County	Shari Herzfeld (Los Angeles) 562.463.7004 sherzfeld@riohondo.edu  Laurie Sienkiewicz (Orange County) 714.895.8975 lsienkiewicz@gwc.cccd.edu	

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Information &amp; Communication Technologies (ICT)/Digital Media</b>	Stephen Wright 805.496.8583 steve@wrightca.com  ict-dm.net	Region A Northern Inland Northern Coastal  Greater Sacramento  Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey  Region C Central Valley, Mother Lode  Region D South Central Coast  Region E San Diego/Imperial  Region F Inland Empire Desert  Region G Los Angeles Orange County	Myron Curtis 530.892.3065 curtismy@butte.edu  Steven Linthicum 916.300.7602 slinthicum@sierracollege.edu  Richard Grotegut (IT & Computer Science) Cell: 925.354.8785 rgrotegut@gmail.com  Dennis Mohle 559.442.4600 x 8471 dennis.mohle@fresnocitycollege.edu  Paula Hodge 661.362.5108 paula.hodge@canyons.edu  Leroy T. Brady 619.388.3999 lbrady@sdccd.edu  Susanne Mata 951.487.3435 smata@sbccd.cc.ca.us  Dan Watanabe (Los Angeles) 310.339.3990 watanabedan-ideas@yahoo.com  Maria Madrigal (Orange County) 714.241.5835 madrigal_maria@rsccd.edu

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Life Sciences/ Biotech</b>	<p>Sandra Slivka 619.388.7490 sslivka@sdccd.edu calbiotechcareers.org Twitter: @ CBiotechCareers</p>	Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	<p>Josie Sette 510.979.7952 jsette@ohlone.edu</p>
		Region E San Diego/Imperial	<p>TBD - Sandra Slivka (Interim) 619.388.7490 sslivka@sdccd.edu</p>
<b>Retail/Hospitality/ Tourism 'Learn and Earn'</b>	<p>Philip Sutton 310.973.3172 psutton@elcamino.edu californiaRHT.com</p>	Region B SF/San Mateo, East Bay Silicon Valley, North Bay Santa Cruz/Monterey	<p>Andrea Vizenor 650.766.5060 (Cell) 650.738.7124 (Office) vizenora@smccd.edu</p>
		Region C Central Valley, Mother Lode	<p>Shelley Attix 209.386.6734 shelley.attix@mccd.edu</p>
		Region G Los Angeles Orange County	<p>Ruth Cossio-Muniz 714.564.5521 cossio_muniz_ruth@rsccd.edu</p>

Sector	Sector Navigator	Macroregion Served	Deputy Sector Navigators
<b>Small Business</b>	Charles Eason 707.863.7846 charles.eason@solano.edu Twitter: @CharlesEason5 smallbusinesssector.net	Region A Northern Inland Northern Coastal  Greater Sacramento	Rachelle Modena 530.242.7635 rmodena@ShastaCollege.edu  Cornelius Brown 916.224.5593 cbrown@yccd.edu
		Region B SF/San Mateo, Silicon Valley, Santa Cruz / Monterey  East Bay, North Bay	Gabriela Sapp 415.254.5094 gasapp@cabrillo.edu  Molly Stuart 707.256.7255 mstuart@napavalley.edu
		Region C Central Valley, Mother Lode	Indria Gillespie 209.954.5069 Office 209.481.9605 Cell igillespie@deltacollege.edu Twitter: @CentralVlyBiz
		Region D South Central Coast	Gayla Jurevich 805.546.3188 gayla_jurevich@cuesta.edu
		Region E San Diego/Imperial	Joe Molina 760.795.8743 jmolina@miracosta.edu
		Region F Inland Empire Desert	Lisa Kiplinger-Kennedy 760.954.5334 Lisak.kennedy@vvc.edu
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## REGIONAL CONSORTIA

Macroregion	Regional Consortia Chair/Vice Chair	Regional TA Provider: Centers of Excellence for Labor Market Research	Community College CEO Serving as Regional Liaison	Regional TA Provider: K-14 Pathways (formerly SB1070 Directors)
Region A Northern Inland, Northern Coastal, Greater Sacramento  Regional Consortia Website: <a href="http://fnrc.org/">http://fnrc.org/</a>	Interim Co-Chair: Tessa Miley 530.895.2894 mileyte@butte.edu  Co-Chair: Jamey Nye 916.563.3207 NyeJ@losrios.edu	Aaron Wilcher 916.563.3233 wilchea@losrios.edu	Doug Houston	Tanya Meyer 530.283.0202 tmeyer@frc.edu  Teri Munger 916.484.8021 mungert@arc.losrios.edu
Region B SF/San Mateo, East Bay, Silicon Valley, North Bay, Santa Cruz/ Monterey  Regional Consortia Website: <a href="http://bacc.net">http://bacc.net</a>	Chair: Rock Pfotenhauer 831.479.6482 rock@bacc.net  Director: Kit O'Doherty 650.560.9798 kitodoherty@gmail.com	John Carrese 415.452.5529 jcarrese@ccsf.edu	Judy Miner	Northeast Bay Janine Kaiser 510.542.9138 kaiser@compasspolicy.com  Southwest Bay Dr. Sharon Turner 650.949.6967 turnersharon@fhda.edu
Region C Central Valley, Mother Lode  Regional Consortia Website: <a href="http://crconsortium.com">crconsortium.com</a>	Chair: Karri Hammerstrom 559.324.6476 karri.hammerstrom@reedleycollege.edu	Nora Seronello 209.575.6894 seronellon@mjc.edu	Carole Goldsmith	Leticia Garza leticia.garza@kccd.edu
Region D South Central Coast  Regional Consortia Website: <a href="http://sccrcolleges.org/">http://sccrcolleges.org/</a>	Chair: Luann Swanberg 805.479.7670 lswanberg2@gmail.com  Co-Chair: Diane Hollems 805.448.2106 diane.hollems@gmail.com	Laura Coleman 916.563.3235 colemal@losrios.edu	Dianne Van Hook	Karen Miles Karen.nicolas@canyons.edu

Macroregion	Regional Consortia Chair/Vice Chair	Regional TA Provider: Centers of Excellence for Labor Market Research	Community College CEO Serving as Regional Liaison	Regional TA Provider: K-14 Pathways (formerly SB1070 Directors)
Region E San Diego/Imperial  Regional Consortia Website: <a href="http://myworkforceconnection.org">myworkforceconnection.org</a>	Chair: Mary Wylie 619.957.5540 <a href="mailto:marywylie2011@gmail.com">marywylie2011@gmail.com</a>	Evgeniya (Zhenya) Lindstrom 909.652.7753 <a href="mailto:zhenya.lindstrom@chaffey.edu">zhenya.lindstrom@chaffey.edu</a>	Sunita Cooke (via SDICCCA)	Sonia B. Lira 619.644.7657 <a href="mailto:sonia.lira@gcccd.edu">sonia.lira@gcccd.edu</a>
Region F Inland Empire, Desert  Regional Consortia Website: <a href="http://www.desertcolleges.org/">www.desertcolleges.org/</a>	Chair: Julie Pehkonen 951.222.8026 <a href="mailto:julie.pehkonen@rcc.edu">julie.pehkonen@rcc.edu</a>	Michael Goss 909.652.7754 <a href="mailto:michael.goss@chaffey.edu">michael.goss@chaffey.edu</a>	Ed Knudson	TBD
Region G Los Angeles, Orange County  Regional Consortia Website: <a href="http://www.laocrc.org">www.laocrc.org</a>	Co-Chair - Los Angeles: Richard Verches 310.367.0842 <a href="mailto:verches@verizon.net">verches@verizon.net</a>  Co-Chair - Orange County: Gustavo Chamorro 714.241.5810 <a href="mailto:chamorro_gustavo@rsccd.edu">chamorro_gustavo@rsccd.edu</a>	Lori Sanchez 909.274.6106 <a href="mailto:lsanchez144@mtsac.edu">lsanchez144@mtsac.edu</a>	Los Angeles Bill Scroggins  Orange County Raul Rodriguez	Los Angeles - LACCD Colleges Dr. Laura Cantu 323.265.8646 <a href="mailto:cantulb@elac.edu">cantulb@elac.edu</a>  Los Angeles County - Non-LACCD Colleges Dr. Lyla Eddington 818.599.4212 562.908.3422 <a href="mailto:leddington@riohondo.edu">leddington@riohondo.edu</a>  Orange County Stephanie Feger 714.438.4834 <a href="mailto:sfeger@cccd.edu">sfeger@cccd.edu</a>



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Labor Market Research: Centers of Excellence see Regional Consortia list for contacts by region	Laura Coleman, First Contact 916.563.3235   colemal@losrios.edu
Leadership and Coordination Support (EDPAC/ WEDPAC)	Justin Wallace 661.362.3788   Justin.Wallace@canyons.edu
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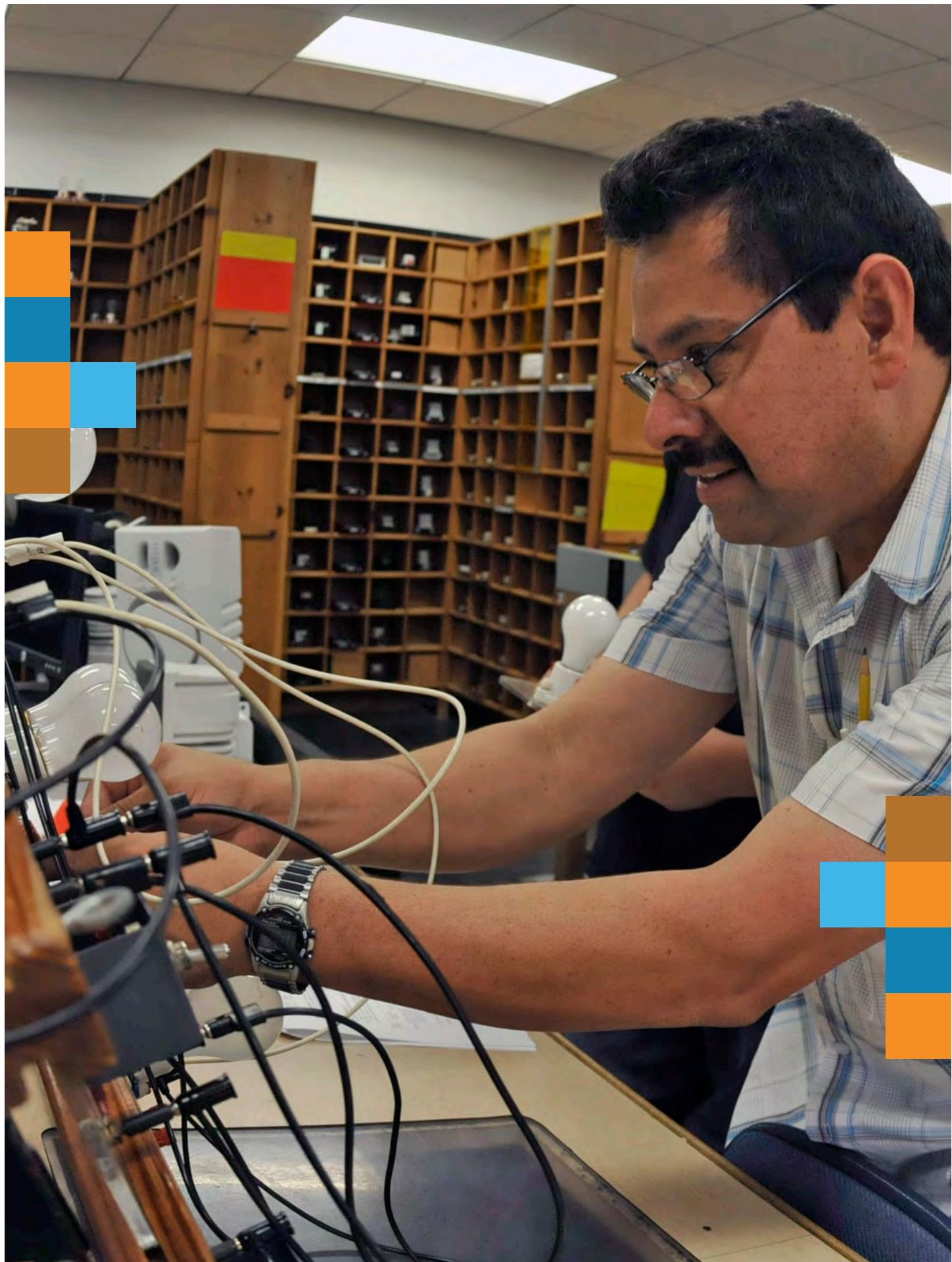


Photo Credit: Mt. San Antonio College

# APPENDIX C

WEDPAC/EDPAC/STRONG WORKFORCE IMPLEMENTATION ADVISORY

## WEDPAC/EDPAC/STRONG WORKFORCE IMPLEMENTATION ADVISORY

Name	Title & Organization	Representation	Membership Body (scope*)
Barbara Baran	Principal, EDGE Coalition	Policy Advocate	WEDPAC
Bernie Kotlier	Executive Director, Sustainable Energy Solutions	Industry: Energy, Construction & Utilities	EDPAC
Bill Scroggins	President & CEO, Mt. San Antonio College	Community College: CEO - Los Angeles	EDPAC
Brian McKeown	Oakland Lead, Kiva	Industry: Small Business	EDPAC
Carole Goldsmith	President, West Hills College-Coalinga	Community College: CEO - Central Valley/Mother Lode	EDPAC
Cathy Martin	Vice President of Workforce, California Hospital Association	Industry: Health	EDPAC
Chris Flask	Manager, Genentech, Inc.	Industry: Life Science/Biotech	EDPAC
Dave Meisel	Director Transportation Services, PG&E	Industry: Advanced Transportation	EDPAC
Dianne Van Hook	Chancellor, Santa Clarita Community College District	Community College: CEO - South Central	EDPAC
Douglas Houston	Chancellor, Yuba Community College District	Community College: CEO - North Far North	EDPAC
Dylan Hendricks	Program Director, Institute for the Future	Industry: Information & Communications Technology / Digital Media	EDPAC
Ed Knudson	CEO, Antelope Valley College	Community College: CEO - Inland Empire	EDPAC
Grant Goold	Program Director, American River College; Chair, ASCCC CTE Leadership Committee ASCCC Executive Committee	Community College: Faculty	EDPAC

Name	Title & Organization	Representation	Membership Body (scope*)
Gregory Anderson	Vice President of Instruction, Cañada College	Community College: Chief Instructional Officer	WEDPAC
Greg Peterson	Vice President, Student Support Services, Long Beach City College	Community College: Student Support Services	WEDPAC
Gustavo Herrera	Western Regional Director, Young Invincibles	Policy Advocate	WEDPAC
Jack Buckhorn	Business Manager, IBEW Local 551	Labor	WEDPAC
James Lanich	President & CEO, Educational Results Partnership	STEM	WEDPAC
James Mayer	President & CEO, CAFWD	Economic Development	EDPAC
Jamey Nye	CTE Regional Consortia Co-Chair - North Far North Region, Doing What MATTERS for Jobs & the Economy	Community College: DWM CTE Regional Consortia	WEDPAC
Jessica Garcia-Kohl	Vice President of City Development, LRNG		WEDPAC
Jim Caldwell	Statewide Sector Navigator for Energy, Construction & Utilities, Doing What MATTERS for Jobs & the Economy	Community College: DWM Sector Navigator	WEDPAC
John Stanskas	Vice President, San Bernardino Valley College	Community College: Statewide Academic Senate	WEDPAC
Joyce Johnson	Dean, Career Technical Education / Nursing & Allied Health, Mt. San Jacinto College	Community College: CTE Dean	WEDPAC
Judy Miner	Chancellor, Foothill-DeAnza Community College District	Community College: CEO - Bay Region	EDPAC
Keerthana Muthukrishnan	System Affairs Director, Region IV	Community College: Student Senate	EDPAC
Leigh-Anne Elizondo	Interim Lead Interpreter, Ohlone College	Community College: Classified	EDPAC

Name	Title & Organization	Representation	Membership Body (scope*)
Linda Wah	Board of Trustee, Pasadena Community College District	Community College: Trustee	WEDPAC
Lorraine Slatterly-Farrell	At Large Representative, Mt. San Jacinto College	Community College: Statewide Academic Senate	WEDPAC
Lynn Mohrfeld	President/CEO, California Hotel & Lodging Association	Industry: Retail, Tourism & Hospitality	EDPAC
Mary Kimball	Executive Director, Center for Land Based Learning	Industry: Agriculture, Water & Environmental Technologies	EDPAC
Norma Ambriz-Galaviz	President, Merritt College	Community College: CEO - Bay Region	EDPAC
Patricia de Cos	Deputy Executive Director, California Board of Education	K-12 Policy	WEDPAC
Raul Rodriguez	Chancellor, Rancho Santiago Community College District	Community College: CEO - Orange County	EDPAC
Rebecca Miller	Workforce Director, SEIU United Healthcare Workers-West	Labor	WEDPAC
Richard Swanson	Regional Director, U.S. Department of Commerce	Industry: Global Trade & Logistics	EDPAC
Rob Sanger	Manager of Training Services, CA Manufacturing & Technology Association	Industry: Advanced Manufacturing	EDPAC
Sunita Cooke	President & Superintendent, MiraCosta Community College District	Community College: CEO - San Diego/ Imperial	EDPAC
Susan Hackwood	Executive Director, California Council on Science and Technology		WEDPAC
Tim Rainey	Executive Director, California Workforce Development Board	State Agencies on WIOA Implementation Committee	EDPAC



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